

U.S. Department of Housing and Urban Development 451 Seventh Street, SW Washington, DC 20410 www.hud.gov espanol.hud.gov

### Environmental Assessment Determinations and Compliance Findings for HUD-assisted Projects 24 CFR Part 58

Project Name:

7th Avenue Commons

Responsible Entity:

City of Tucson Housing and Community Development Department

Preparer:

Glenn Fournie, Project Coordinator

Certifying Officer Name and Title:

Sally Stang, Director Housing and Community Development Department

Direct Comments to:

Glenn Fournie, 520-837-5408 glenn.fournie@tucsonaz.gov

Date:

May 2016

**Project Location:** 

The Property includes 4 Parcels: 58 E. 5<sup>th</sup> Street, 546 N. Stone Avenue, 529 N. 7th Avenue, 519 N. 7th Avenue, Tucson Pima County AZ 85705. Pima County Assessors parcel numbers: 117-04-2160, 117-04-214A, 117-04-214B, 117-04-214C.

### Statement of Purpose and Need for the Proposal: [40 CFR 1508.9(b)]

There is little to no permanent affordable family housing located in or near downtown Tucson that serves low-income workers with families. The project is located within 1/2 mile of the Tucson Downtown Core, which is rapidly developing due to the new street car line and where a plethora of new businesses have opened. Most of these new businesses require lower wage, service industry employees. Recent studies indicate that in Transit Oriented Development (TOD) communities, high capacity transit and transit stations, such as the Sunlinks Tucson Modern Streetcar and the Ronstadt Transit Center, significantly reduce per capita automobile travel.

The project is consistent with the City of Tucson Consolidated Plan (Plan Tucson) policies and goals to develop supportive housing including: 1) New construction and/or rehabilitation of rental units for target populations; 2) Complexes serving special target populations where, in this case, 100% of the units are designated for low-income households; 3) The preservation of existing lower income housing and/or increasing the supply of lower income housing; and 4) Self-sufficiency in lower income households. This project also supports the strategy for helping people make the transition to permanent housing and independent living.

A Market Study of the proposed 7<sup>th</sup> Avenue Commons project was completed in February 2015 by Lea & Company. Strong support for the development based on typical tax credit standards, is evident - the data shows a clear and significant number of income-qualified households that require affordable housing. The favorable capture rates and consideration of the "net" Demand Model are a clear indication that there is strong demand to support the proposed project.

Description of the Proposal: Include all contemplated actions which logically are either geographically or functionally a composite part of the project, regardless of the source of funding. [24 CFR 58.32, 40 CFR 1508.25]

The project will include demolition, adaptive reuse of existing structures and new construction to provide 50 very low income apartments, 27- 1 bedroom, 7- 2 bedroom, 16- 3 bedroom units. 27 apartments will be located within the existing warehouse building with the addition of a 2<sup>nd</sup> story, and 23 apartments will be newly-constructed in a new 3-level building. A two level parking structure is included in the project. A community building/clubhouse will be located on site, along with a shared laundry facility and fenced playground area. The streetscape along 7th Avenue will include urban landscape and hardscape and public art. The proposed development project will include the adaptive re-use of the existing 12,000 sq. ft. warehouse/office building. The Project will include a combination of set-asides at 40%, 50% and 60% of Median Income.

The project has been designed using the Arizona Department of Housing (ADOH) prescriptive path to sustainability, which is roughly equivalent to a LEED Gold standard. Specific green building elements to be utilized will include hard surface flooring, smoke-free units and common areas, Energy Star windows and doors, Environmentally Preferred Products (EPP) such as flooring and concrete, low flow toilets, thermal and sound attenutaing performance windows, highly-reflective roofs, Energy Star high efficiency and low water usage appliances.

The project is within 2 blocks of major north/south and east/west public transportation routes, including direct links to the Ronstadt Transit Center and the Sunlink street car line, linking downtown to the Rio Nuevo project, the 4th Avenue district, the University Medical Center and the University of Arizona. The site is within 1/2 mile of the downtown core and its expanding job opportunities, grocery shopping, retail shops, libraries, parks, restaurants, museums and the YMCA. The site is within walking distance of K-12 schools, including charter schools and within 1 mile of the University of Arizona. The project site is within 4 miles of major medical centers, including the Southern Arizona Veterans Health Care System.

### Existing Conditions and Trends: Describe the existing conditions of the project area and its surroundings, and trends likely to continue in the absence of the project. [24 CFR 58.40(a)]

The property is located at 529 North 7th Avenue, at the intersection of 7<sup>th</sup> Avenue and 5th Street (southwest corner), and adjacent to the West University, John Springs Neighborhood and the Warehouse Historic Districts. The property is an approximate 65,000 net sq. ft. and includes vacant land (currently a surface parking lot) plus an existing warehouse/artist space buildings of approximately 12,000 sq. ft. The property is zoned City of Tucson C-3, which will allow the development of over 50 apartments.

The project site is within 500 feet of the currently in design Downtown Links Phase III project. Downtown Links is an improvement project that provides enhancements, benefits, and connections for pedestrians, bicyclists, and motorists. The Downtown Links project is a 30 mph, four-lane road north of the Union Pacific railroad tracks that will connect Barraza-Aviation Parkway to I-10. This project upgrades critical infrastructure, specifically drainage systems, which has removed a large portion of Downtown and surrounding neighborhoods from the 100-year flood plain. When complete, Downtown Links will offer improved access and connections, including an underpass and an overpass, for pedestrians, bicyclists and motorists. Additionally, the project will include new and safer railroad crossings and designate the downtown crossing as a railroad quiet zone.

### **Funding Information**

Grant Number	HUD Program	Funding Amount
M-14-DC-040-229	<del></del>	\$750,000.00
M 11 D 0		

Estimated Total HUD Funded Amount: \$750,000.00

Estimated Total Project Cost (HUD and non-HUD funds):\$ 14,077,331.00

### Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDER	S, AND REGULAT	TIONS LISTED AT 24 CFR 50.4 and 58.6
Airport Hazards  24 CFR Part 51 Subpart D	Yes No	The project is not within an FAA-designated civilian airport Runway Clear Zone (RCZ) or Runway Protection Zone, or within a military airfield Clear Zone (CZ) or Accident Potential Zone (APZ) Approach Protection Zone. Map on file.  http://maps.tucsonaz.gov/hcd/index_old.html

Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement	Yes No	There are no coastal barrier resources in HUD Region IX. <a href="http://www.fws.gov/cbra/Maps/Mapper.html">http://www.fws.gov/cbra/Maps/Mapper.html</a>
Act of 1990 [16 USC 3501]  Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC	Yes No	The project is not in a designated flood zone, FEMA Zone Xs 4019C-2276 L 6/11. LOMR effective date 6/13/16. Flood insurance not required. Map and LOMR on file.  http://maps.tucsonaz.gov/hcd/index_old.html
5154a]		
STATUTES, EXECUTIVE ORDERS	, AND REGULA	Other than a brief period of construction, the project
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes No	will have no negative impact on air quality issues of community pollution levels. No EPA/ADEQ Air restrictions for the site. Control of dust during construction is required under the Pima County Fugitive dust map. Permits for activity will not be issued until compliance is certified. Tucson is in conformance with SIP maintenance plan.  http://www.epa.gov/region9/air/actions/az.html
Coastal Zone Management Coastal	Yes No	Arizona has no coastal zones. Map on file.
Zone Management Act, sections	$\sqcap x$	
307(c) & (d)  Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes No	A Phase I Environmental Site Assessment (ESA) Report was completed by Terracon on February 27, 2015. The report identified 5 possible recognized environmental conditions (RECs) in connection with the site. The follow up Limited Site Investigative Report dated February 3, 2016 found the project site free of hazardous materials, contamination, toxic chemicals, gasses and radioactive substances at concentrations determined by Arizona Department of Environmental Quality (ADEQ) standards which could affect the health or safety of occupants or conflict with the intended use of the subject property. Site visit by HCD staff 10/2/15 updated 2/23/16. Full report is on file. Maps on file. <a href="http://maps.tucsonaz.gov/hcd/index_old.html">http://maps.tucsonaz.gov/hcd/index_old.html</a> <a href="https://www.epa.gov/nepa/nepassist">https://www.epa.gov/nepa/nepassist</a>
Endangered Species  Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes No	The project will have no effect on any federally protected (listed or proposed) Threatened or Endangered Species, nor adversely modify designated critical habitats. Site is fully developed in a developed urban neighborhood and has been graded, leveled and completely built up or paved. Phase I environmental site assessment dated 2/27/15 and updated 6/3/15 by Terracon Consultants, Inc. Site visit by HCD staff 10/2/15 updated 2/23/16. Maps, photos and memo in file. https://www.epa.gov/nepa/nepassist
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes No	The project will expose neither people nor buildings to any above-ground explosive or flammable fuels or chemicals. Map and aerial map attached. Phase I environmental site assessment dated 2/27/15 and updated 6/3/15 by Terracon Consultants, Inc. Site visit by HCD staff 10/2/15 updated 2/23/16. Maps or file. http://maps.tucsonaz.gov/hcd/index_old.html

		https://www.epa.gov/nepa/nepassist
Farmlands Protection  Farmland Protection Policy Act of 1981, particularly sections 1504(b) 1541; 7 CFR Part 658	Yes No	The City of Tucson has no protected farmland including prime or unique farmland, or other farmland of statewide or local importance. Site is in a fully developed urban environment per USGS Topo Map. Map on File.
Floodplain Management  Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes No	The project does not involve property acquisition, management, construction or improvements within a floodplain identified by FEMA maps. Map on file.  http://maps.tucsonaz.gov/hcd/index_old.html
Historic Preservation  National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes No	There are no historic properties affected per 36 CFR 800.4. Reviewed and approved per programmatic agreement by City of Tucson HPO office 2/25/15 with SHPO concurrence. Emails on file.
Noise Abatement and Control  Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes No ☐ X	Site is within 700 of railroad and 300 feet of the planned Downtown Links Parkway. DNL Noise Study by Terracon and Acoustical Consulting Services dated 5/23/16 determined the DNL level for the site is 71.3 Ldn. The Noise Mitigation letter from Bitform Architecture includes standard construction methods & dual pane noise attenuating windows for an average STC of 32.4, bringing interior DNL to less than 40 decibels. Other than a brief period of construction there should be no increase in noise levels. DNL Study, building plans & specs and mitigation letter on file <a href="http://maps.tucsonaz.gov/hcd/index_old.html">http://maps.tucsonaz.gov/hcd/index_old.html</a>
Sole Source Aquifers  Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes No	The project need not be referred to EPA for evaluation according to the HUD-EPA (Region IX) Sole Source Aquifer Memorandum of Understanding of 1990. Location is currently served by a municipal water and sewer system and will have no impact on the aquifer. Memorandum and map on file.  http://www.epa.gov/region9/water/groundwater/ssa.hml
Wetlands Protection  Executive Order 11990, particularly sections 2 and 5	Yes No	The project does not involve new construction within or adjacent to wet lands, marshes, wet meadows, much flats or natural ponds. Maps on file. <a href="https://www.epa.gov/nepa/nepassist">https://www.epa.gov/nepa/nepassist</a> <a href="https://www.fws.gov/wetlands/Data/Mapper.html">http://www.fws.gov/wetlands/Data/Mapper.html</a>
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes No	The project is not located within one mile of a listed Wild and Scenic River. Tucson and Southern Arizon have no wild and scenic rivers. Map on file.  http://www.americanrivers.org/initiatives/wild-and-scenic/wild-and-scenic-rivers-map/
ENVIRONMENTAL JUSTICE		
Environmental Justice  Executive Order 12898	Yes No	The proposed site is suitable for its proposed use and will NOT be adversely impacted by adverse environmental conditions. The project is an urban infill project with adaptive reuse of warehouse space to low income housing, in a mixed income area. <a href="https://geomap.ffiec.gov/FFIECGeocMap/Geocodelapl.aspx">https://geomap.ffiec.gov/FFIECGeocMap/Geocodelapl.aspx</a>

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. All conditions, attenuation or mitigation measures have been clearly identified.

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.

- (1) Minor beneficial impact
- (2) No impact anticipated
- (3) Minor Adverse Impact May require mitigation

(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental	Impact	Y (7) 1 (1)
Assessment Factor	Code	Impact Evaluation
LAND DEVELOPMEN	[	
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The property is zoned City of Tucson C-3, which will allow the development of over 50 apartments. This zone provides for mid-rise development of general commercial uses that serve the community and region, located downtown or in other major activity center areas. Residential and other related uses shall also be permitted. Site plan was reviewed and approved by Tucson Planning and Development Services Department, Ernie Duarte 2/25/15. Letter on file.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	No evidence of erosion, drainage/storm water runoff on site visit by HCD staff 10/2/15, updated 2/23/16 or in Custom Soil Resource Report dated 1/11/16.
Hazards and Nuisances including Site Safety and Noise	2	No visible evidence of onsite hazards or nuisances Phase I environmental site assessment dated 2/27/15 and updated 6/3/15 by Terracon Consultants, Inc. and site visit by HCD staff 10/2/15 updated 2/23/16. Reports on file.
Energy Consumption	2	Minor increase in energy consumption by 50 new units of housing. Tucson Electric Power currently supplies electricity and will continue service. All utilities are currently on site and ready for construction. Buildings will be constructed to Arizona Department of Housing (ADOH) prescriptive path to sustainability, which is roughly equivalent to a LEED Gold standard, with energy efficient and low water usage appliances. HOME application on file.

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns		The target population for the project will be very low income families. The site is within 1/2 mile of the downtown core and its expanding job opportunities. Many of the new jobs are entry level or service jobs in the hotel, restaurant and retail businesses. 7 <sup>th</sup> Avenue Commons anticipates hiring approximately 10-15 subcontractors during the construction phase of the project. The project will follow Section 3 in all of employment, construction and subcontracting activities. HOME application and maps on file. <a href="https://geomap.ffiec.gov/FFIECGeocMap/GeocodeMap1.aspx">https://geomap.ffiec.gov/FFIECGeocMap/GeocodeMap1.aspx</a>

Demographic Character Changes, Displacement	Project area is a moderate income (33 % below poverty level), mixed race (30% minority), mixed use area with approximately 69% of the housing units currently being used as rentals. The target population for the project will be low income families. The relocation plan by Acquisition Sciences has been submitted to HUD for approval. 10-11 artist work spaces located in the existing warehouse building will require commercial relocation. HOME application and maps on file.
	https://geomap.ffiec.gov/FFIECGeocMap/GeocodeMap1.aspx

77	Impact	
Environmental Assessment Factor	Code	Impact Evaluation
COMMUNITY FACILIT		RVICES
ducational and Cultural acilities	2	magnet high schools and a large number of private charter schools and preschools. TUSD has an open enrollment policy, so any school in the district is open for enrollment. The project site is within a short commute on public transit of a number of colleges and adult education resources including Pima Community College, Troy University, University of Arizona and other educational and cultural enrichment opportunities. Maps on file.  http://tusdl.org/contents/distinfo/choosetusd.asp
Commercial Facilities	2	Site is within 2 miles of major grocery stores, pharmacies, retail and service businesses, discount stores, medical providers and thrift stores. The project is within a short walk of the 4 <sup>th</sup> Avenue shopping district. The project is within 2 blocks of Suntran bus north/south # 19 and east/west #3 routes connecting to transit hubs and the Sunlink streetcar line connecting to the U of A and downtown. Maps on file.
Health Care and Social Services	2	The project site is within 4 miles of 2 major medical centers, including the Southern Arizona VA Health Care campus and the El Rio Health Center. Numerous emergency facilities, clinics, physician services and social services are within an easy commute on public transit. The approximately 140 additional residents will not have an adverse impact on the available services. Maps on file.
Solid Waste Disposal / Recycling	2	The City of Tucson Environmental Services Department currently provides onsite waste disposal and recycling services. The City of Tucson provides extensive recycling options, including construction debris handling and recycling, landfills, green waste recycling and household hazardous waste disposal services.  https://www.tucsonaz.gov/environmental-services
Waste Water / Sanitary Sewers	2	Pima County Wastewater provides wastewater and sewer service to significant of the provided wastewater and sewer service to significant of the provided wastewater and sewer service to significant of the provided wastewater and sewer service to significant of the provided wastewater and sewer service to significant of the provided waste of the provide
Water Supply	2	dated 2/25/15 on file.
Public Safety - Police, Fire and Emergency Medical	2	would not create an unusual or significant burden to TFD. The site is approximately 4 miles from the Rincon Police Station. Response time varies depending on the type of call, but the average time for emerger response is 5 minutes or less. <a href="https://www.tucsonaz.gov/police/operations-division-downtown">https://www.tucsonaz.gov/police/operations-division-downtown</a> The site is approximately 4 miles are a Tucson Fire Department state in the site of
		that the proposed project would not create an unusual or significant  May 2016

		burden to TFD. The project is within 2 miles of Tucson Fire Stations 3 & 4. Average response time for TFD is 4 minutes.  The project site is within 7 miles of major medical centers with emergency medical care including Carondolet St. Mary's Hospital, Banner UMC Medical Center, Southern Arizona VA Health Care Center, Banner UMC Medical Center South and numerous urgent care facilities. Maps on file.
Parks, Open Space and Recreation	2	The project is with walking distance or a short commute on public transit of 3 regional recreation centers including sports fields, swimming pools, fitness programs, recreation classes, senior lunches and other senior programs, basketball courts, tennis courts and open space. There are a number of small parks and open space areas within a reasonable walk of the project site, including the University of Arizona campus and facilities. Maps on file.
Transportation and Accessibility	2	The project is within 2 blocks of Suntran bus north/south # 19 and east/west #3 routes connecting to transit hubs and the Greyhound Bus Line, and within ½ mile of the Sunlink streetcar line connecting to the U of A and downtown. The site is fully accessible by car and has adequate street access and off street parking for current and future development. The residents have access to the City of Tucson Sun Shuttle and other medical transportation providers. Maps and photos on file. <a href="http://www.suntran.com/PDF/routes/AUG_15_rt_3.pdf">http://www.suntran.com/PDF/routes/AUG_15_rt_3.pdf</a>

Environmental	Impact	
Assessment Factor	Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural	2	The site has no unique natural features or water resources. The site is
Features,		fully developed and has been graded, leveled and completely built up or
Water Resources		paved. Phase I environmental site assessment dated 2/27/15 and updated
		6/3/15 by Terracon Consultants, Inc., site visit by HCD staff 10/2/15
		updated 2/23/16. Photos and maps on file.
		http://maps.tucsonaz.gov/hcd/index_old.html
Vegetation, Wildlife	2	The site is fully developed and has been graded, leveled and completely
,		built up or paved. Phase I environmental site assessment dated 2/27/15
		and updated 6/3/15 by Terracon Consultants, Inc. on file and site visit by
		HCD staff 10/2/15 updated 2/23/16. Photos and maps on file.
		http://maps.tucsonaz.gov/hcd/index_old.html
Other Factors		
	<u></u>	

### **Additional Studies Performed:**

Market Demand Analysis by Lea & Company 3/3/15
Phase I Environmental Site Assessment by Terracon Consultants, Inc. 2/27/15, updated 6/3/15
Asbestos & Lead Based Paint Survey by Terracon Consultants, Inc. 2/27/15
Custom Soil Resource Report for Pima County Arizona, USDA NRCS dated 1/11/16
Limited Site Investigation Report (Phase II) Terracon Consultants, Inc. 2/3/16
Noise Survey Report by Terracon 5/12/16
Amendment to Noise Study by Acoustical Consulting Services 5/23/16

Field Inspection (Date and completed by): 10/2/15 by Glenn Fournie, HCD staff updated 2/23/16.

### List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]:

Arizona Department of Housing (ADOH)

City of Tucson Housing and Community Development Department

City of Tucson Planning and Development Services

City of Tucson Department of Transportation

City of Tucson Suntran

Tucson Fire Department-Sgt. Mike Wilder

Tucson Police Department-Captain Jeff Langejans

City of Tucson Department of Environmental Quality

Tucson Water

Pima County Wastewater Management

City of Tucson Historic Preservation Officer Dr. Jonathan Mabry

SHPO Robert Frankenburger

Bitform Architecture Group LLC

Gardener Capital Development

Butler Housing Company Inc.

Cumulative Impact Analysis [24 CFR 58.32]:

The primary objective for this project is to invest in Tucson neighborhoods, while providing a suitable living environment and supporting low income households working in and/or benefitting from living near downtown Tucson. This project provides affordable housing while also expanding services access and better utilizing the existing residential designation of this area. The housing project is aligned with the goals of the City of Tucson General plan, including Infill Incentive District plans for the downtown area. The proposed improvements provide positive secondary benefits of stabilizing area tax bases and improving overall property values.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

Several alternatives were considered for this project; however, the residential location of this site is uniquely central and accessible to individuals who would benefit most from this affordable housing development, those without transportation and those who work in downtown areas. Additional locational considerations included the target amenities as defined by the Arizona Department of Housing. One of the primary factors that necessitate this development is the dire need for affordable family rental housing near downtown Tucson, which is also located on or near existing bus/transportation lines and within walking distance to downtown shopping and important services.

This is a project of opportunity with the potential to address the need for development in an existing residential area with a private development partner who has resources to leverage federal and private funding. Alternative sites that exist do not provide the cost effective or "ready to develop" assets of the subject property. Location of another site with the combination of access to transportation services and public amenities, the residential setting, zoning compatibility would not be readily found.

Reducing the number of units or density of the project would move it out of the range of economic feasibility for the developer.

This project has been developed with the overall goal of securing resources to provide affordable housing assistance in the downtown area that creates a suitable living environment and can expand available resources. There is an economy of scale that if the funding is too limited, it is too costly to implement the activity. Other resources which might be available are not readily apparent and developing additional funding resources for this project would only create a substantial delay or eliminate the project completely. The alternative if necessary resources were not available at the estimated levels would most likely eliminate the possibility of expanding assistance to low income families with affordable housing.

No Action Alternative [24 CFR 58.40(e)]:

The no action alternative is not feasible for this project. The dire need for low income family housing in this area, based on the jurisdictional demographic needs has been researched and established in the City of Tucson Consolidated Plan. If the project were abandoned the need to redevelop the downtown area would not be served and the need to address the affordable family housing demand which is increasing in the City of Tucson.

### **Summary of Findings and Conclusions:**

The proposed 7th Avenue Commons project will not adversely affect environment or the neighborhood. The activity is compatible with the existing uses in the area. There will be little to no impact on existing resources or services in the area. This project has been developed with the overall goal of securing resources to provide affordable housing assistance in the downtown area that creates a suitable living environment and can expand available resources.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

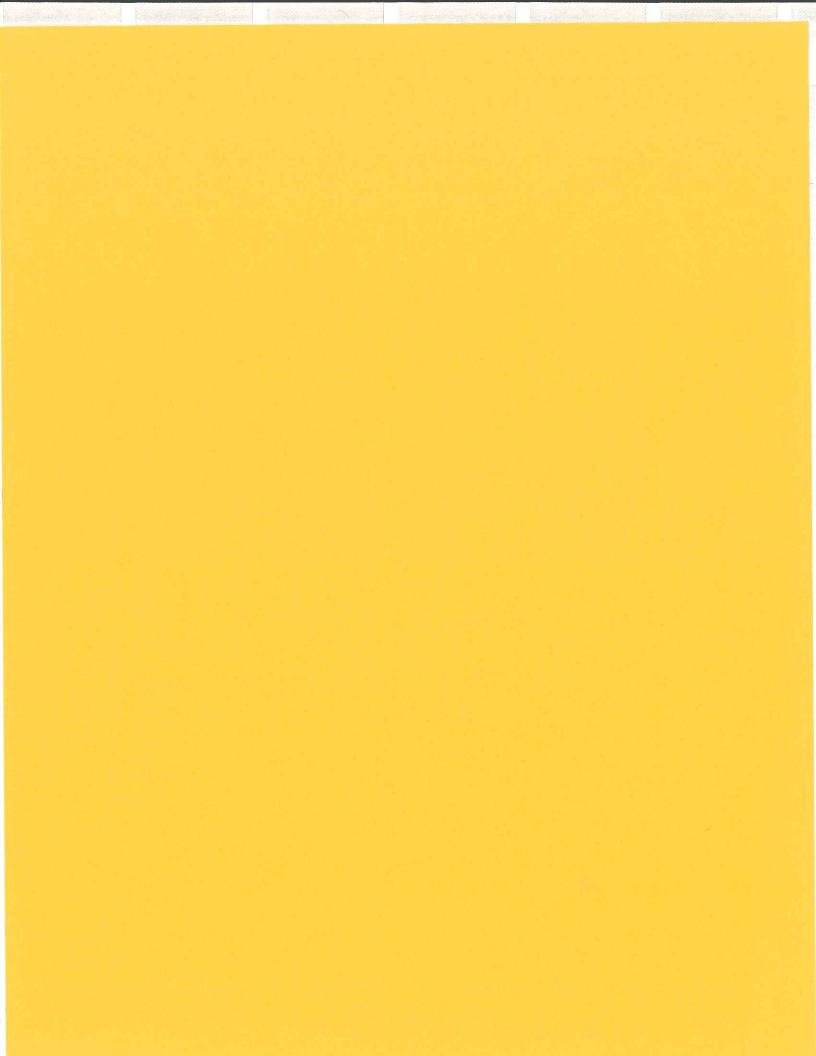
Developer will utilize construction practices and noise attenuating dual paned window to meet or exceed HUD DNL noise requirements of less than 45 decibel interior sound level as recommended in the Acoustical Sciences Noise study and confirmed in the letter from Bitform Architects dated 5/24/16.

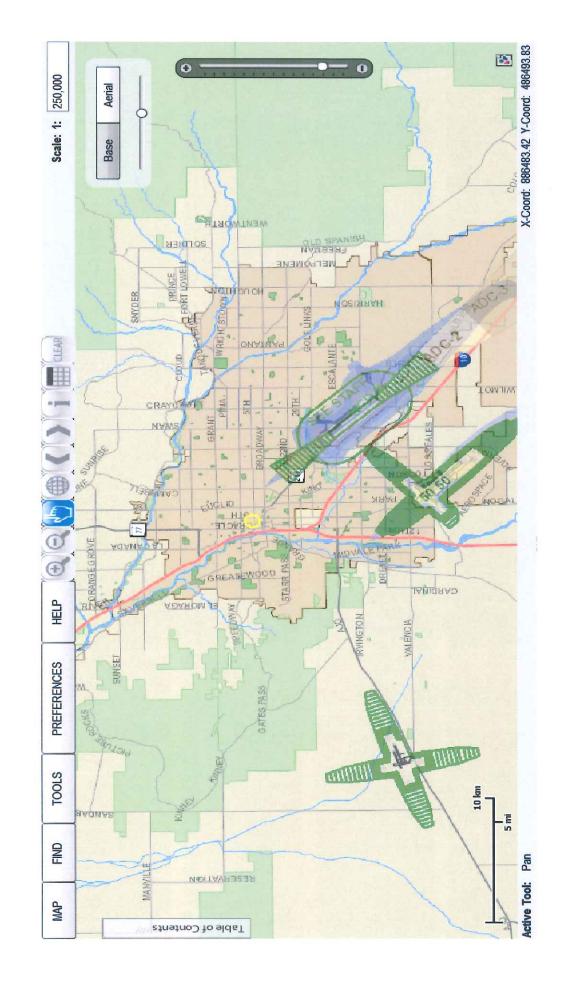
### **Determination:**

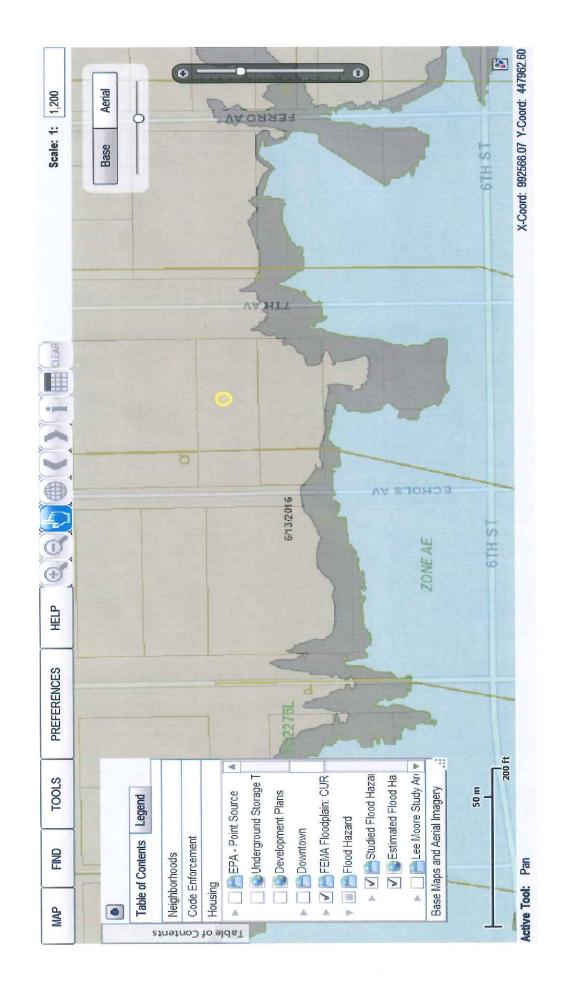
Department

X Finding of No Significant Impact [24 CFR 58.40(g)(1); 40 CFR 1508.27] The project will not result in a significant impact on the quality of the human environment.
Finding of Significant Impact [24 CFR 58.40(g)(2); 40 CFR 1508.27] The project may significantly affect the quality of the human environment.
Preparer Signature:
Community Development Department
Certifying Officer Signature: Date: 6/14/2016  Name/Title: Sally Stang, Director City of Tucson Housing and Community Development

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).







## FEMA's National Flood Hazard Layer (Official) Home ▼

Basemap Details

Measure

Print

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### Legend

Legend

Content

About

- U Unaccredited Levee
- T Accredited Levee

### General Structures

- -- Flood Structure
- Bridge
- Dam, Weir, Jetty Other Structure

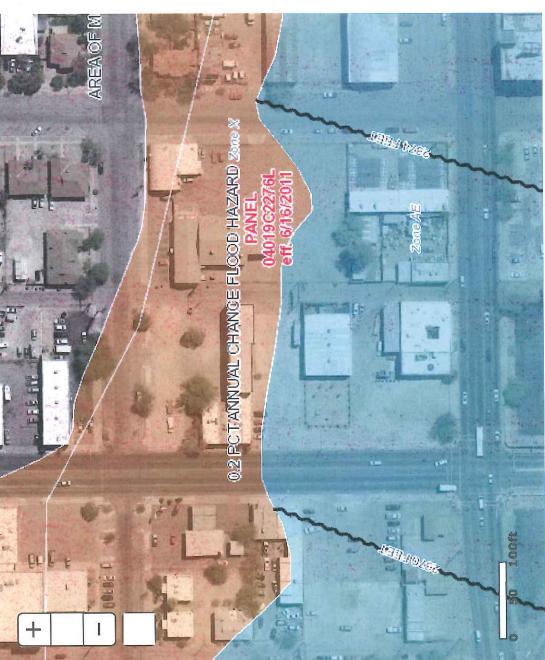
### Flood Hazard Boundaries

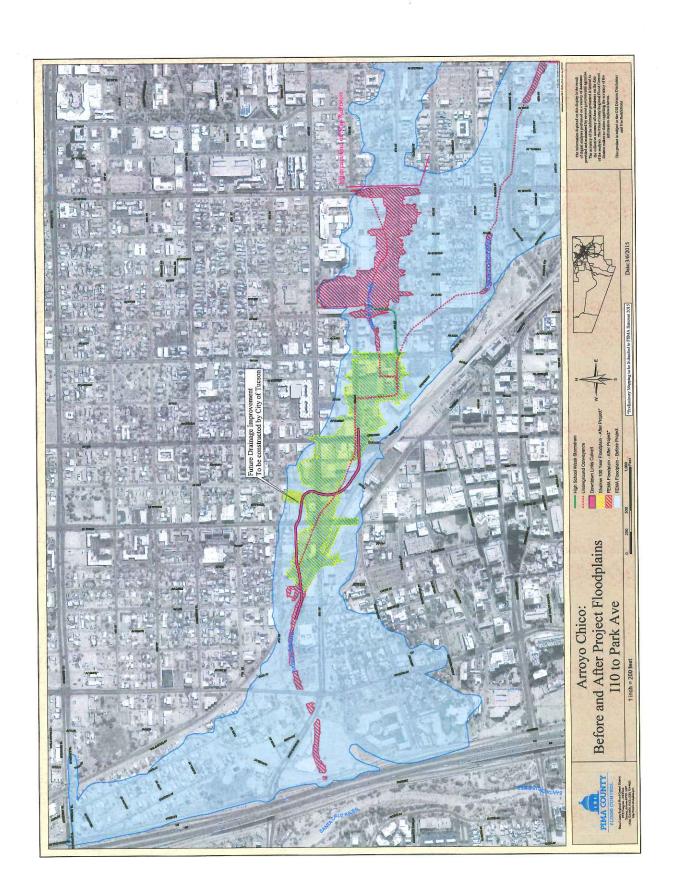
SFHA / Flood Zone Boundary Other Boundaries — Limit Lines

### Flood Hazard Zones

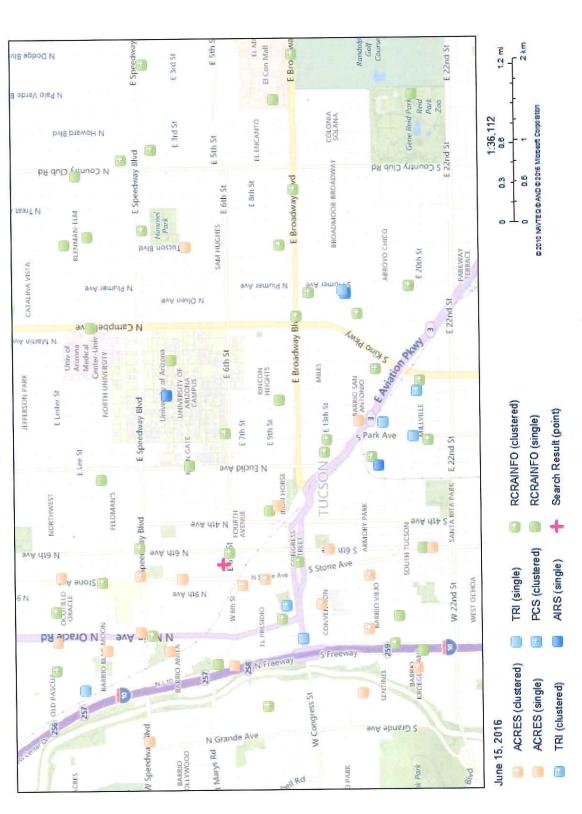
- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard

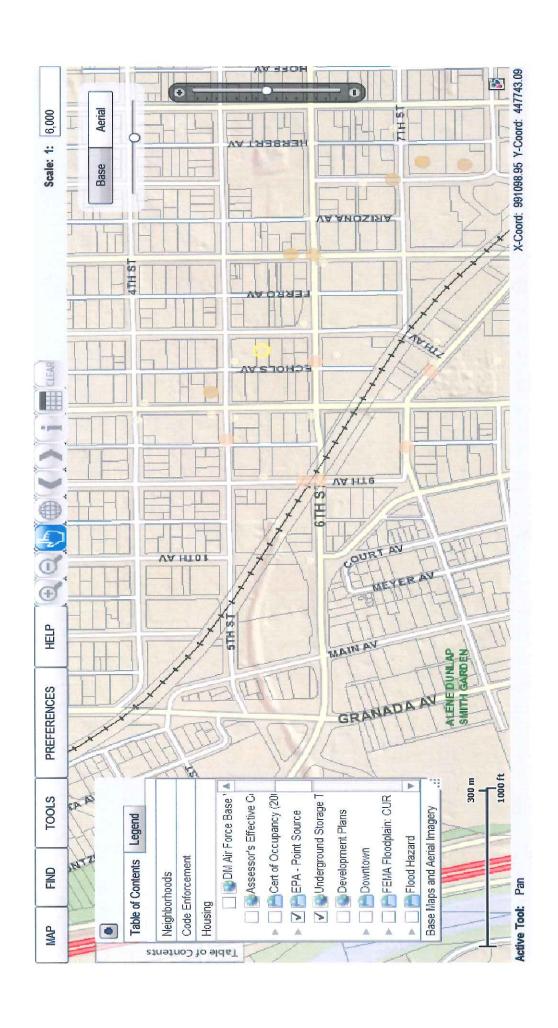
Esri.com , Help . Terms of Use . Privacy . Contact Esri . Contact Us. Report Abuse



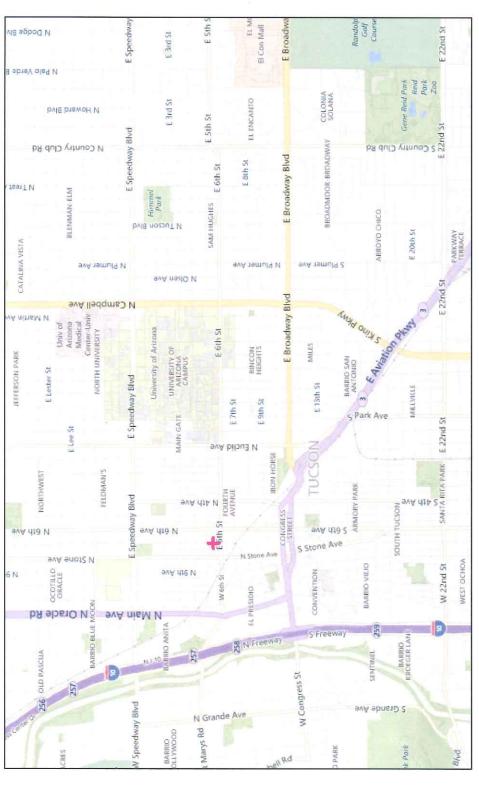


7th Avenue Commons EPA sites





# 7th Avenue Commons Critical Habitat





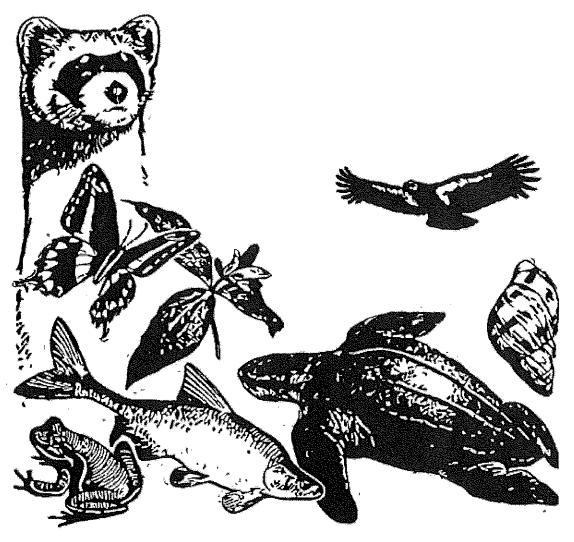


### 5th-7th Center

### IPaC Trust Resource Report

Generated January 11, 2016 02:58 PM MST, IPaC v2.3.2

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (<a href="https://ecos.fws.gov/ipac/">https://ecos.fws.gov/ipac/</a>): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

### US Fish & Wildlife Service

### IPaC Trust Resource Report

NAME

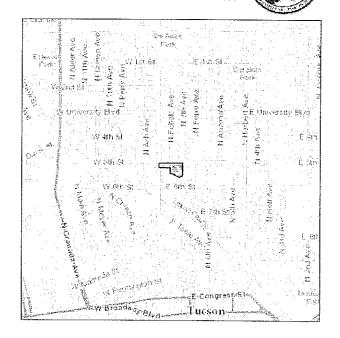
5th-7th Center

LOCATION

Pima County, Arizona

IPAC LINK

https://ecos.fws.gov/ipac/project/ RWJHD-P5G75-B5LHX-LUGMS-ZH6KFI



### U.S. Fish & Wildlife Contact Information

Trust resources in this location are managed by:

### Arizona Ecological Services Field Office

2321 West Royal Palm Road, Suite 103 Phoenix, AZ 85021-4915 (602) 242-0210

### **Endangered Species**

Proposed, candidate, threatened, and endangered species are managed by the <u>Endangered Species Program</u> of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require FWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

<u>Section 7</u> of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from the Regulatory Documents section in IPaC.

The list of species below are those that may occur or could potentially be affected by activities in this location:

### **Birds**

### California Least Tern Sterna antillarum browni

Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B03X

### Yellow-billed Cuckoo Coccyzus americanus

Threatened

CRITICAL HABITAT

There is proposed critical habitat designated for this species.

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B06R

### Flowering Plants

### Pima Pineapple Cactus Coryphantha scheeri var. robustispina

Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=Q27M

### Mammals

Jaguar Panthera onca

Endangered

CRITICAL HABITAT

There is final critical habitat designated for this species.

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=A040

Lesser Long-nosed Bat Leptonycteris curasoae yerbabuenae

Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=A0AD

### Reptiles

Northern Mexican Gartersnake Thamnophis eques megalops

Threatened

CRITICAL HABITAT

There is proposed critical habitat designated for this species.

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=C04Q

Sonoyta Mud Turtle Kinosternon sonoriense longifemorale

Candidate

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=C067

### Critical Habitats

There are no critical habitats in this location

### Migratory Birds

Birds are protected by the <u>Migratory Bird Treaty Act</u> and the <u>Bald and Golden Eagle</u> <u>Protection Act</u>.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

Additional information can be found using the following links:

- Birds of Conservation Concern
   http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
   http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data <u>http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php</u>

The following species of migratory birds could potentially be affected by activities in this location:

### Bald Eagle Haliaeetus leucocephalus

Bird of conservation concern

Season: Wintering

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B008

### Bell's Vireo Vireo bellii

Bird of conservation concern

Season: Breeding

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0JX

### Bendire's Thrasher Toxostoma bendirei

Bird of conservation concern

Year-round

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0IF

### Black-chinned Sparrow Spizella atrogularis

Bird of conservation concern

Season: Wintering

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0IR

### Blue-throated Hummingbird Lampornis clemenciae

Bird of conservation concern

Season: Breeding

### Brewer's Sparrow Spizella breweri

Bird of conservation concern

Season: Wintering

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0HA

Burrowing Owl Athene cunicularia

Year-round

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=BONC

Bird of conservation concern

Bird of conservation concern

Chestnut-collared Longspur Calcarius ornatus

Season: Wintering

Common Black-hawk Buteogallus anthracinus

Season: Breeding

Costa's Hummingbird Calypte costae

Season: Breeding

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0JE

Bird of conservation concern

Bird of conservation concern

Elegant Trogon Trogon elegans

Year-round

Elf Owl Micrathene whitneyi

Season: Breeding

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0GV

Bird of conservation concern

Bird of conservation concern

Bird of conservation concern

Bird of conservation concern

Fox Sparrow Passerella iliaca

Gila Woodpecker Melanerpes uropygialis

Season: Wintering

Year-round

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0EH

Gilded Flicker Colaptes chrysoides Bird of conservation concern

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0EG

Golden Eagle Aquila chrysaetos Bird of conservation concern

Year-round

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0DV

Gray Vireo Vireo vicinior Bird of conservation concern

Season: Wintering

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0G5

Lawrence's Goldfinch Carduelis lawrencei Bird of conservation concern

Year-round

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0J8

Lewis's Woodpecker Melanerpes lewis Bird of conservation concern

Season: Wintering

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0HQ

Loggerhead Shrike Lanius Iudovicianus Bird of conservation concern

Year-round

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0FY

Long-billed Curlew Numenius americanus Bird of conservation concern

Season: Wintering

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B06S

Lucy's Warbler Vermivora luciae Bird of conservation concern

Season: Breeding

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0DL

01/11/2016 02:58 PM Information for Planning and Conservation (IPsC) v2.3.2 Mccown's Longspur Calcarius mccownii

Season: Wintering

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0HB

Northern Beardless-tyrannulet Camptostoma imberbe

Season: Breeding

Peregrine Falcon Falco peregrinus

Year-round

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0FU

Prairie Falcon Falco mexicanus

Year-round

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0ER

Rufous-crowned Sparrow Aimophila ruficeps

Year-round

https://ecos.fws.gov/tess\_public/profile/speciesProfile,action?spcode=B0MX

Rufous-winged Sparrow Aimophila carpalis

Year-round

Short-eared Owl Asio flammeus

Season: Wintering

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0HD

Sonoran Yellow Warbler Dendroica petechia ssp. sonorana

Season: Breeding

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0F7

Sprague's Pipit Anthus spragueii

Season: Wintering

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0GD

Swainson's Hawk Buteo swainsoni

Season: Breeding

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B070

Varied Bunting Passerina versicolor

Season: Breeding

Willow Flycatcher Empidonax traillii

Season: Breeding

https://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0F6

Bird of conservation concern

### Refuges

Any activity proposed on <u>National Wildlife Refuge</u> lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuges in this location

### Wetlands in the National Wetlands Inventory

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army</u> <u>Corps of Engineers District</u>.

### **DATA LIMITATIONS**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

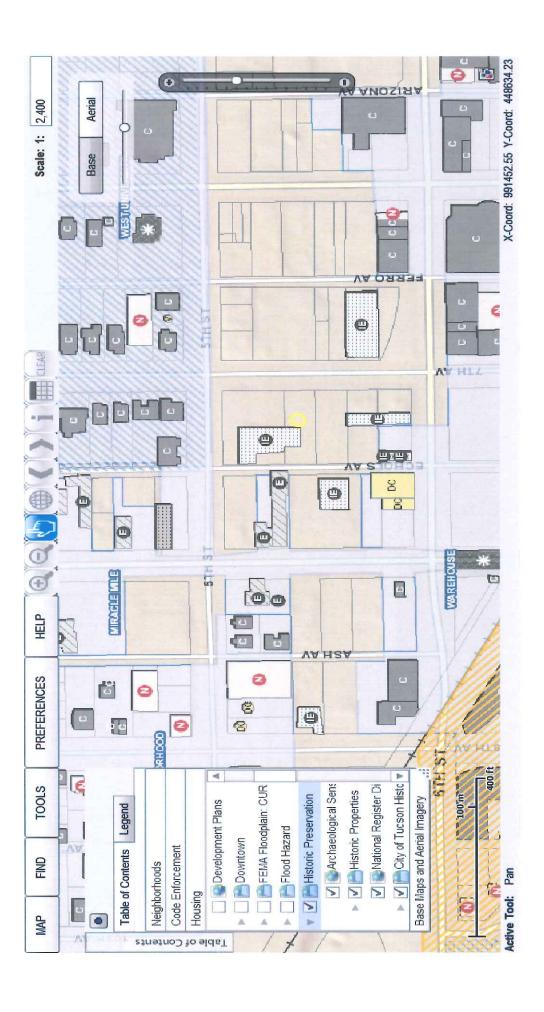
### **DATA EXCLUSIONS**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

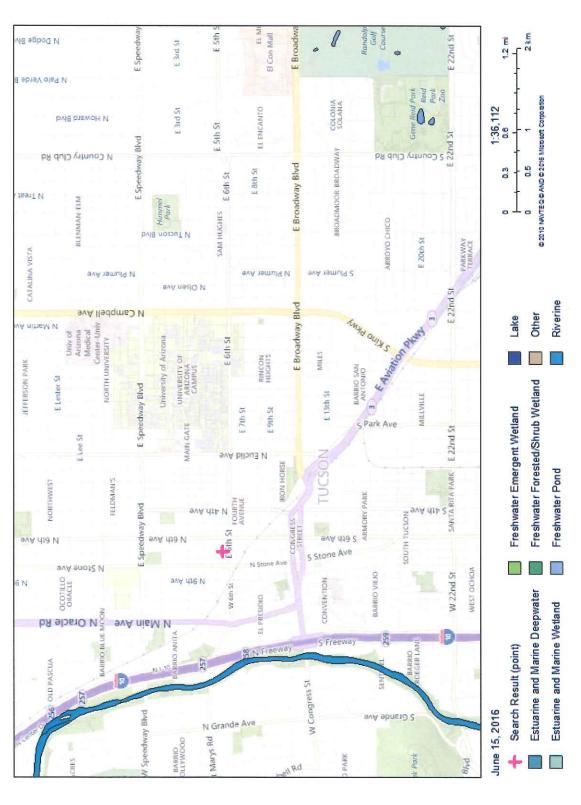
### DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

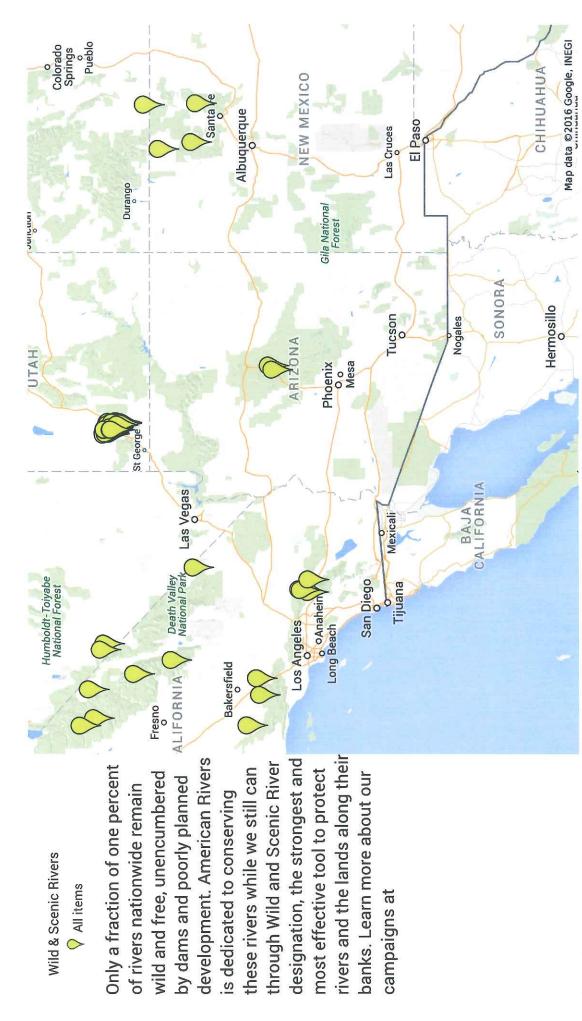
### There are no wetlands in this location



## 7th Avenue Commons Wetlands



# Wild & Scenic Rivers



http://www.americanrivers.org/initiatives/wild-and-scenic/.

# \* FFIEC Geocoding/Mapping System



Matched Address:

MSA: || State: || County: || Tract Code:

Selected Tract

MSA: || State: || County: || Tract Code:

https://geomap.ffiec.gov/FFIECGeocMap/CensDemoMapPrn.aspx



## 2015 FFIEC Geocode Census Report

Address: 529 N 7TH AVE, TUCSON, AZ, 85705 MSA: 46060 - TUCSON, AZ

State: 04 - ARIZONA

County: 019 - PIMA COUNTY

Tract Code: 0004.00

## Summary Census Demographic Information

Tract Income Level	Middle
Underserved or Distressed Tract	No
2015 FFIEC Estimated MSA/MD/non-MSA/MD Median Family Income	\$59,000
2015 Estimated Tract Median Family Income	\$63,809
2010 Tract Median Family Income	\$62,054
Tract Median Family Income %	108.15
	3442
Tract Minority %	30.07
Tract Minority Population	1035
Owner-Occupied Units	364
1- to 4- Family Units	1406

### Census Income Information

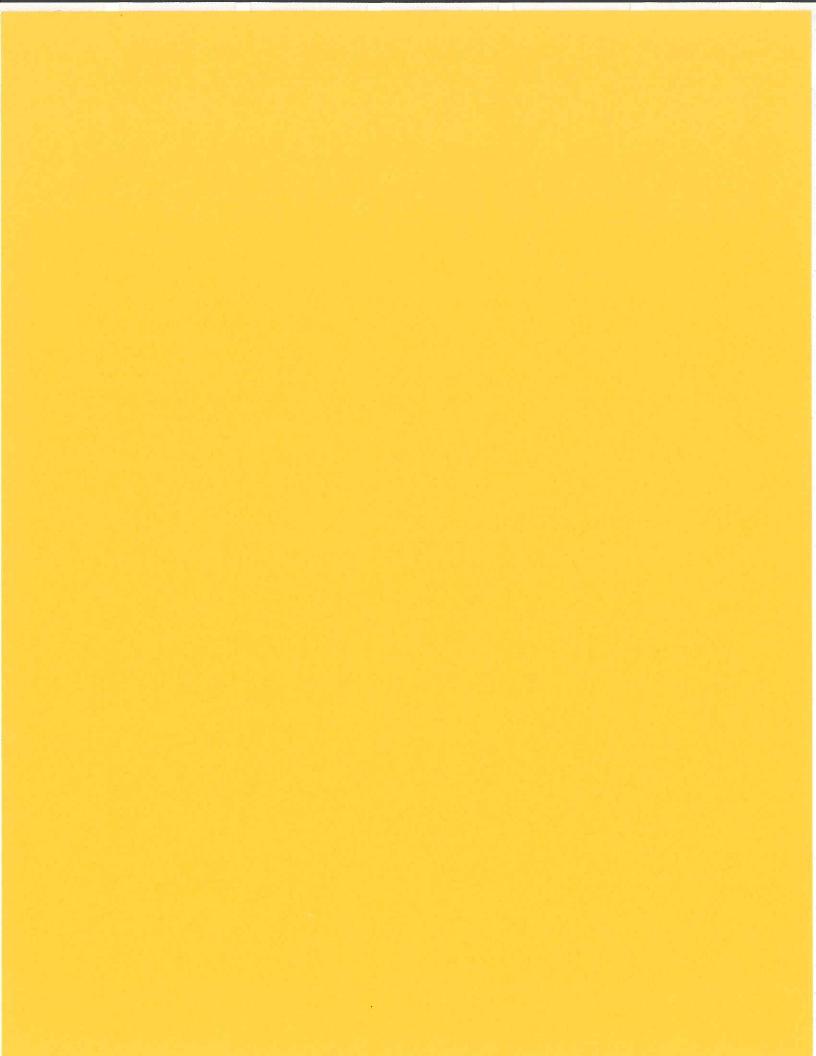
\$24,443	2010 Tract Median Household Income
\$63,809	2015 Estimated Tract Median Family Income
\$62,054	2010 Tract Median Family Income
108.15	Tract Median Family Income %
33.47	% below Poverty Line
\$59,000	2015 FFIEC Estimated MSA/MD/non-MSA/MD Median Family Income
\$57,377	2010 MSA/MD/statewide non-MSA/MD Median Family Income
Middle	Tract Income Level

## Census Population Information

Constant in Constant	
Tract Population	3442
Tract Minority %	30.07
Number of Families	307
Number of Households	1751
Non-Hispanic White Population	2407
Tract Minority Population	1035
American Indian Population	56
Asian/Hawaiian/Pacific Islander Population	162
Black Population	84
Hispanic Population	647
Other/Two or More Races Population	86

## Census Housing Information

Total Housing Units	2009
1- to 4- Family Units	1406
Median House Age (Years)	71
Owner-Occupied Units	364
Renter Occupied Units	1387
Owner Occupied 1- to 4- Family Units	364
Inside Principal City?	YES
Vacant Units	258





### JONATHAN ROTHSCHILD MAYOR

### CITY OF TUCSON OFFICE OF THE MAYOR

255 WEST ALAMEDA P.O. BOX 27210 TUCSON, ARIZONA 85726-7210 PHONE: (520) 791-4201 FAX; (520) 791-5348

February 25, 2015

Arizona Department of Housing ATTN: Michael Trailor, Director 1110 W. Washington St. Suite 310 Phoenix, AZ 85007

Re: LIHTC Application
Butler Housing Co./Gardner Capital Development
7<sup>th</sup> Avenue Commons

Dear Mr. Trailor:

The City of Tucson has developed an inter-departmental review team to evaluate proposed projects within the City and to assist developers in obtaining needed information and support. As such we are providing a standardized support letter and documentation to ensure consistency and completeness. This letter culminates and is endorsed by the appropriate local government officials with details outlined and executed below.

City of Tucson Planning and Development Services Department (PDSD)

Staff from the City of Tucson Planning and Development Services Department has reviewed the site plan and determined that the Project has achieved final site plan approval. A copy of the Arizona Department of Housing LIHTC Form 9 — Local Government Site Plan Approval is attached as Attachment #1. Also, PDSD staff has reviewed project as proposed and confirmed that the current zoning status of C-3 permits constructed of the project as proposed. A copy of the Arizona Department of Housing LIHTC Form 10 — Planning and Zoning Verification is attached as Attachment #2.

Ernie Duarte, Director - PDSD

### City of Tucson Office of Historic Preservation

The City of Tucson is a Certified Local Government (CLG) designated by the National Park Service and the Arizona State Historic Preservation Office (AZ SHPO). This CLG designation requires the City Historic Preservation Officer to formally comment on whether there will be any adverse effects of a HUD-funded project on a historic property or archaeological site, and to consult with the AZ SHPO on how any adverse effects may be avoided, minimized, or mitigated according to federal standards.

The City Historic Preservation Officer has reviewed your proposed LIHTC project partially financed by HOME funding at the above-referenced property. No archaeological or historic sites are recorded within this parcel. The proposed project will have no adverse effect on any identified historic, archaeological, or other cultural resources. The property is not listed in the National Register of Historic Places, and is not eligible for listing in the National Register, either individually or as a contributing property to a potential National Register historic district.

Jonathan Mabry, Historic Preservation Officer

### City of Tucson Housing and Community Development Department

The City of Tucson's Housing and Community Development Department has committed to providing HOME funding of \$215,424 contingent on the project receiving a LIHTC reservation in this tax credit round. The detailed commitment letter is attached as Attachment #3.

Sally Stang, Director - HCD1

### City of Tucson – Water Department

Attached as Attachment #4 is a "will serve" letter from the Tucson Water Department confirming water supply and service for the 7<sup>th</sup> Avenue Commons project.

Alan Forrest, Director Tucson Water

### City of Tucson – Transportation Department

Attached as Attachment #5 is confirmation that there are currently no plans to change, alter, or move bus routes or modern streetcar stops or to reduce service related to the project and detailed on the attachment.

Dar Cole, Transportation Department Director

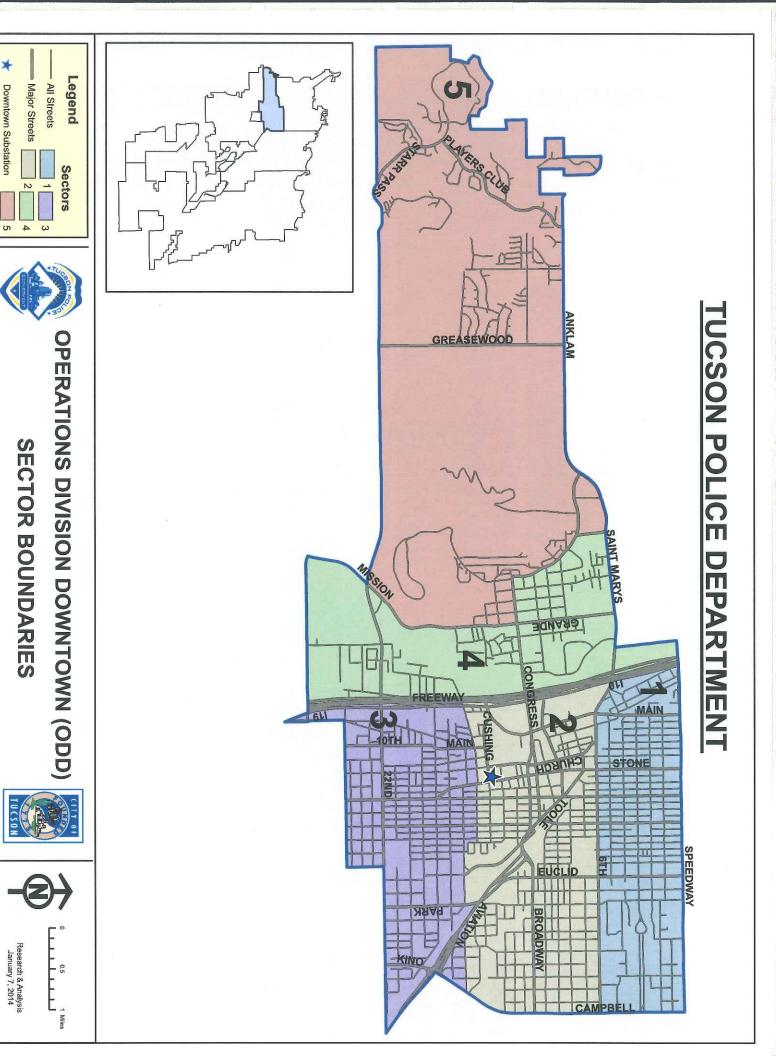
City of Tucson - Office of the Mayor

The 7<sup>th</sup> Avenue Commons project is a tremendous opportunity to expand affordable housing opportunities for low income families situated near two modern streetcar stops through both adaptive re-use of an existing structure and new construction on a key in-fill location. The use of sustainable development and green building will provide high quality, low cost housing for our low and moderate income families. This Transit Oriented project aligns with goals and priority set forth in the City's General Plan, Plan Tucson. I believe that the 7<sup>th</sup> Avenue Commons Project will provide much needed affordable housing and is an exceptional opportunity for the City and its residents.

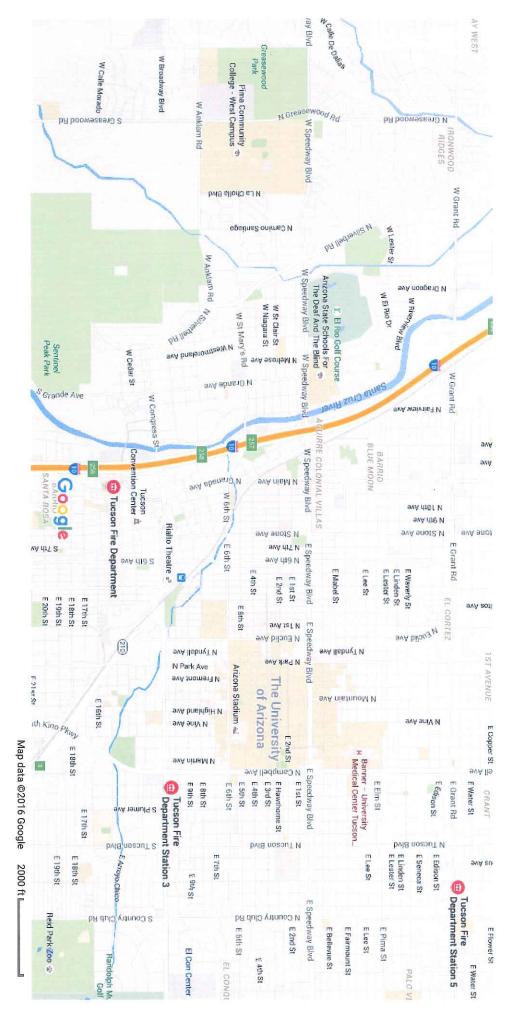
Jonathan Rothschild

Mayor

City of Tucson, Arizona



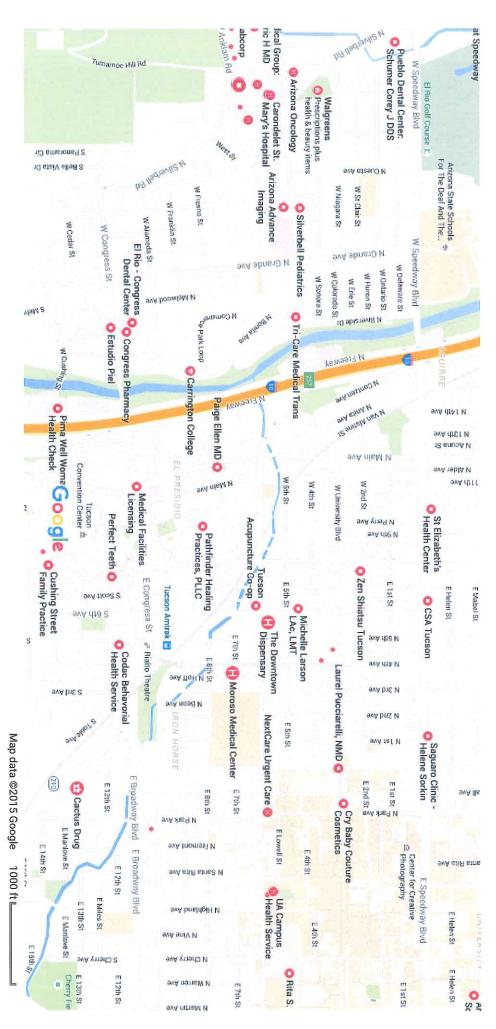
# Google Maps tucson fire department station



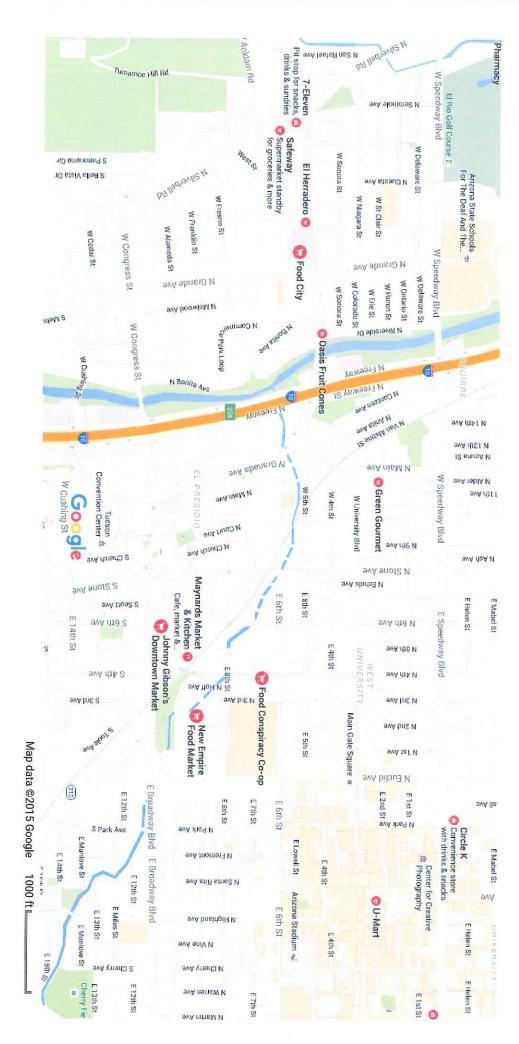
## Google Maps hospitals



## Google Maps medical

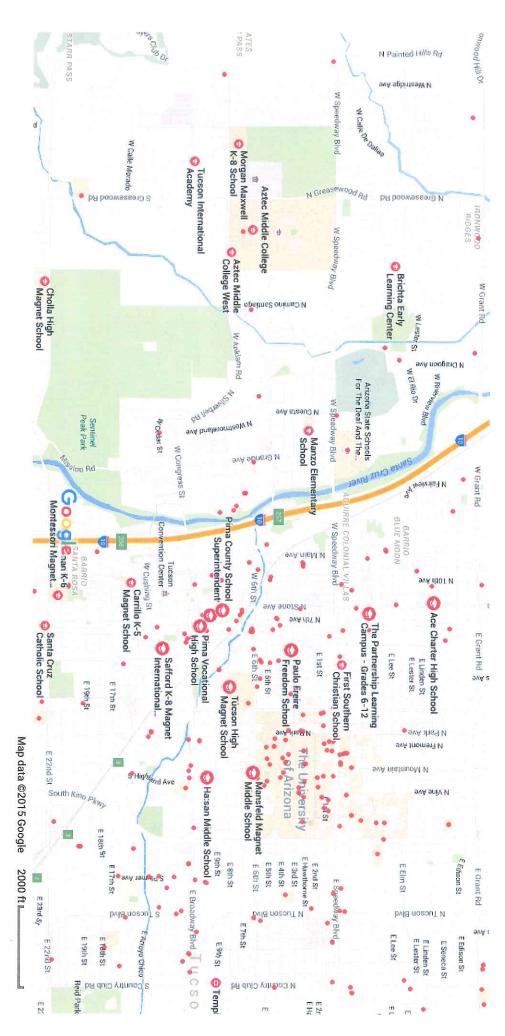


## Google Maps grocery stores



schools - Google Maps

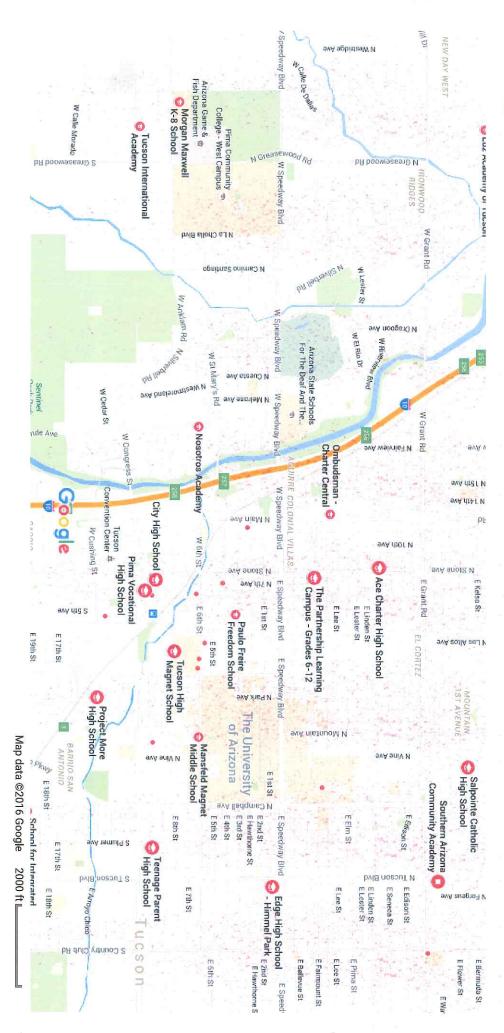
## Google Maps schools



# Google Maps elementary school

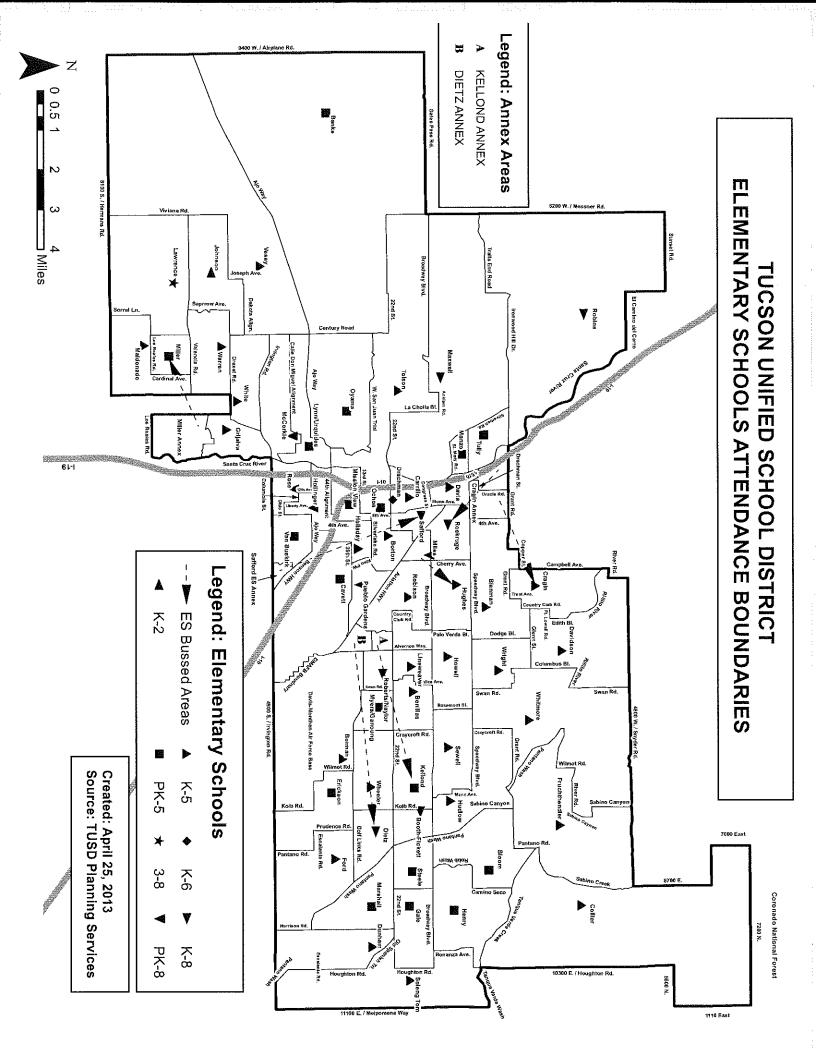


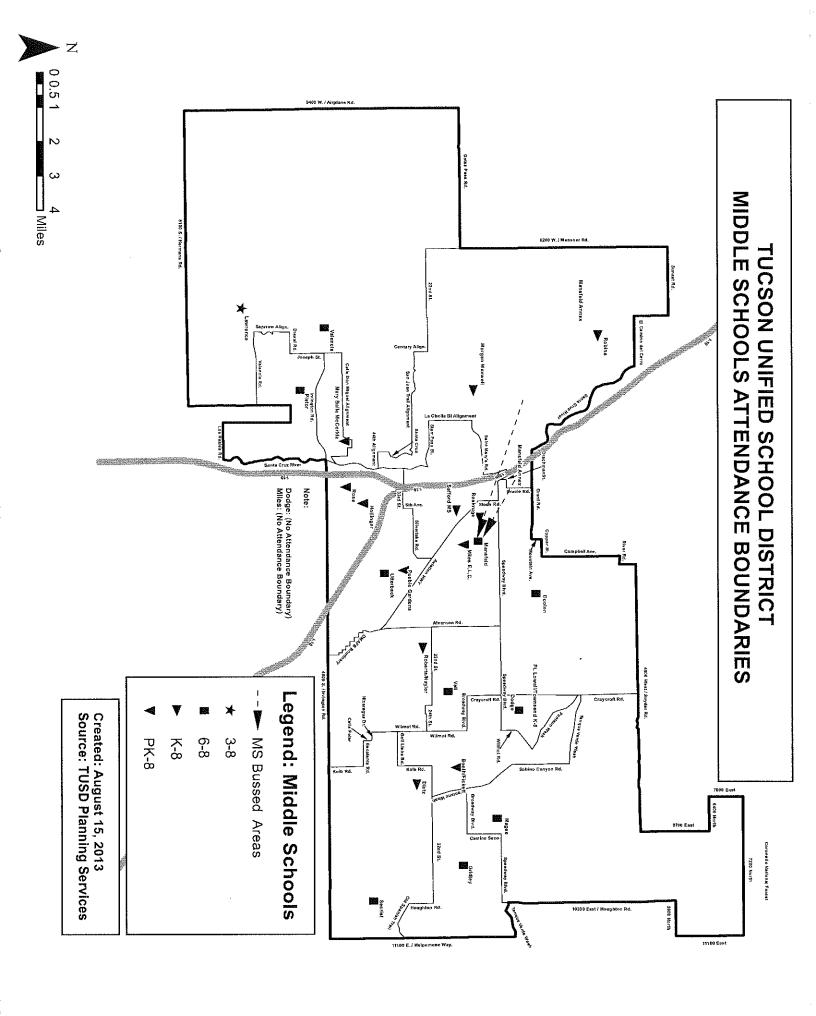
## Google Maps high schools

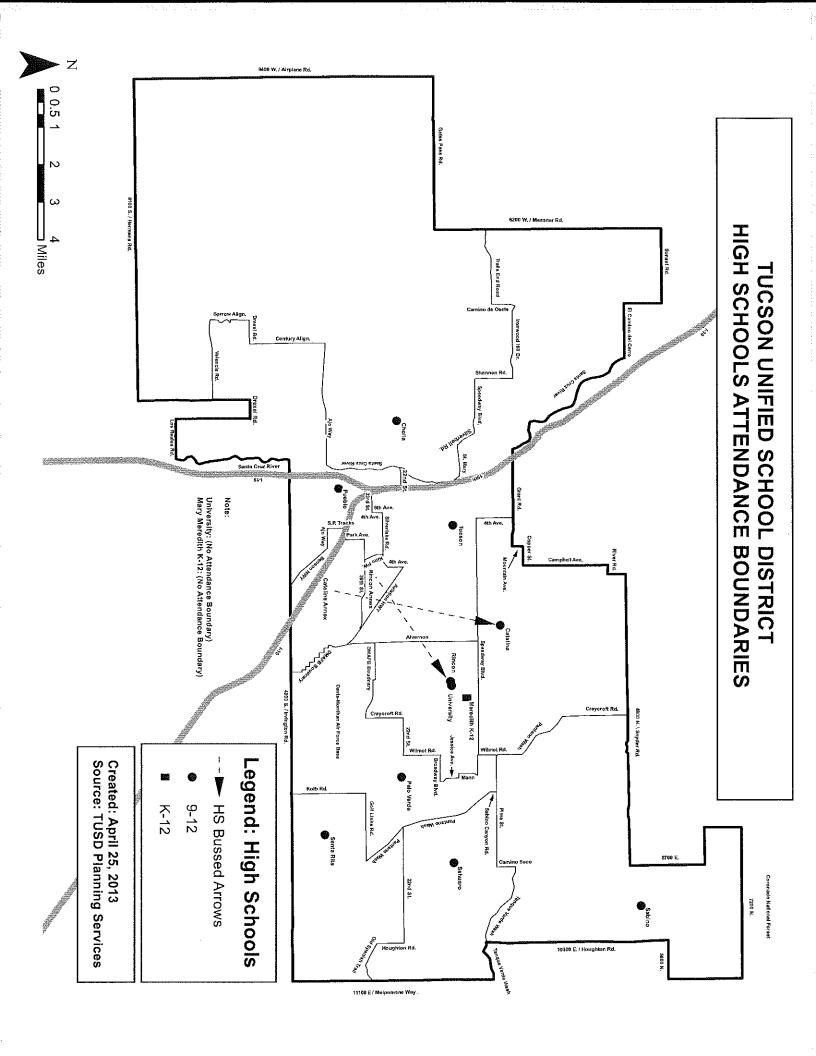


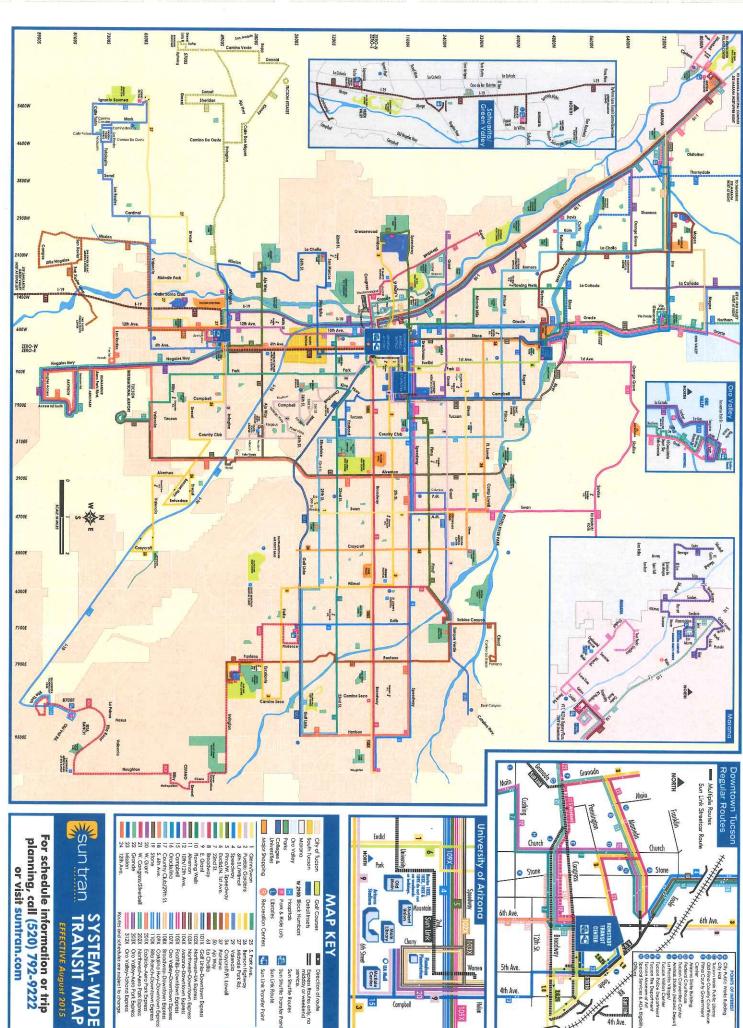
# Google Maps charter schools





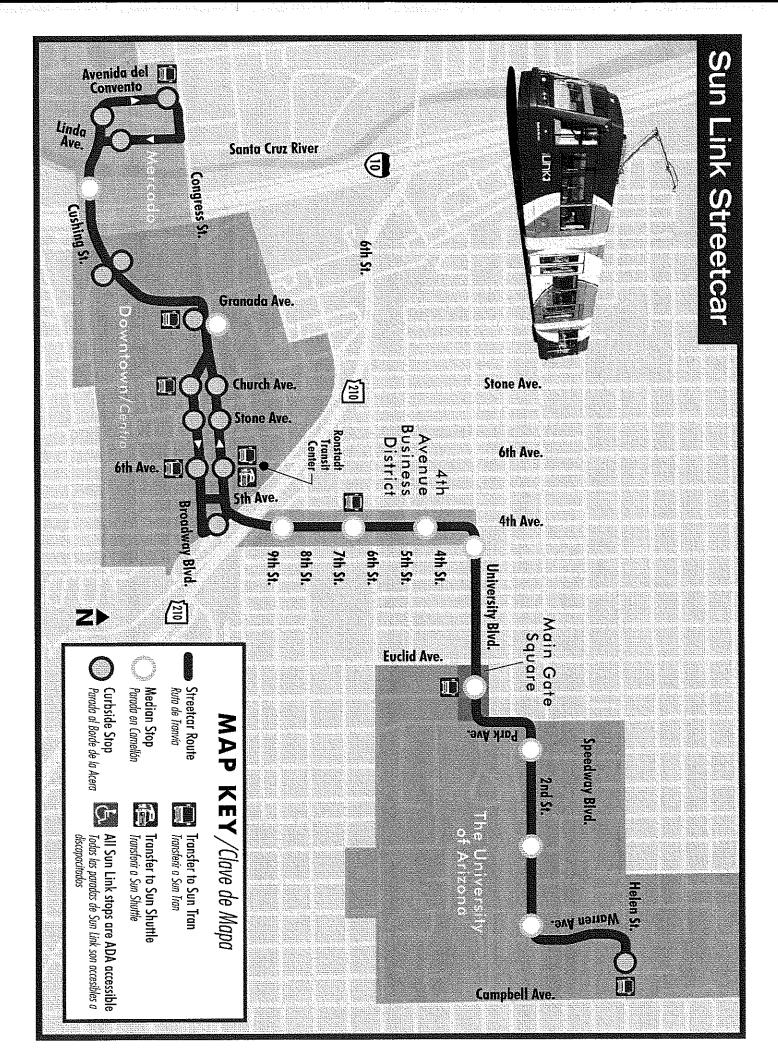






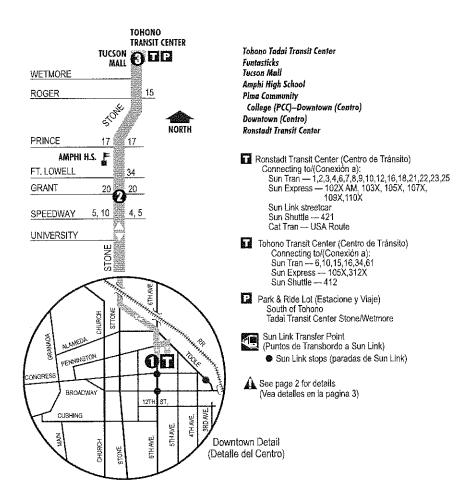
Sun Link Route

4th Ave



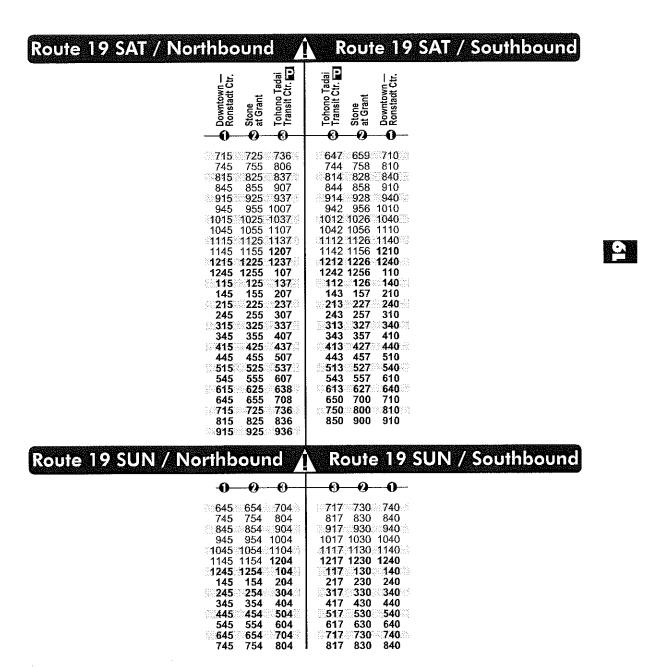


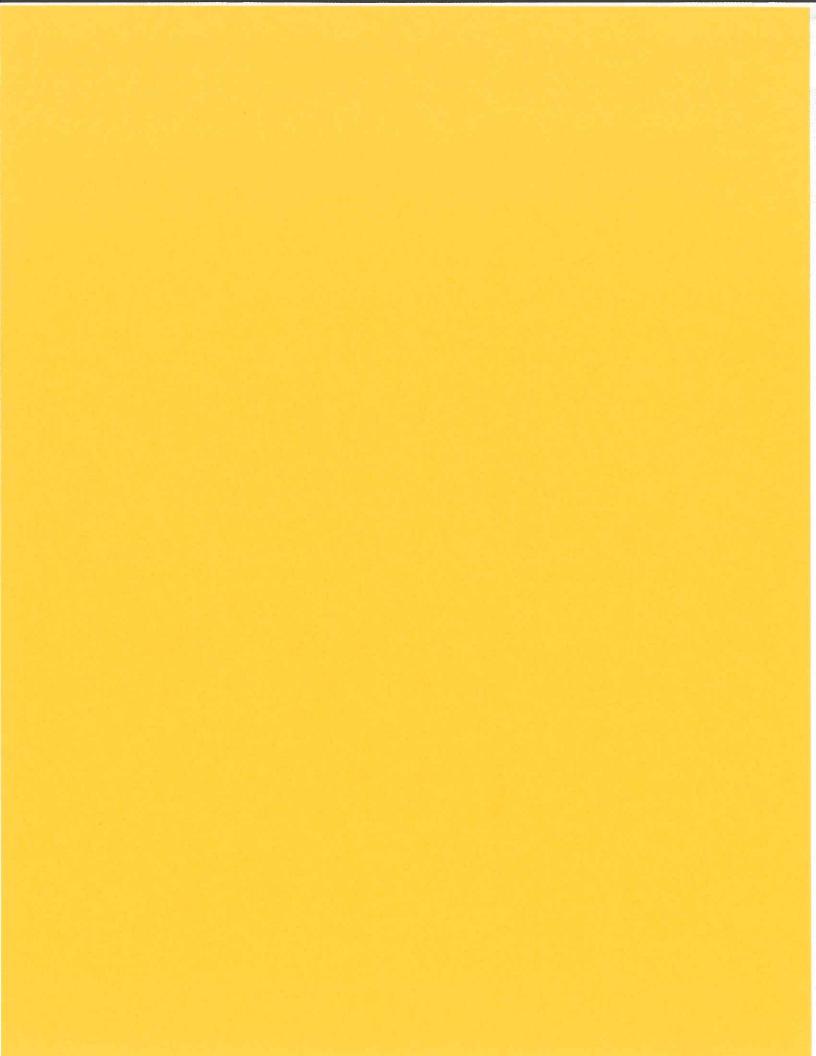
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### Route 19 M-F / Northbound Route 19 M-F / Southbound

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January 11, 2016

Attn: Michael Gardner

Gardner Capital Development, LLC 800 Maryland Avenue, Suite 910

St. Louis, MO 63105

Re: Class I Cultural Resources Records Review

Site Name: 7<sup>th</sup> Avenue Commons Tucson, Pima County, Arizona **Tlerracon** Project No. 63157136

Dear Mr. Gardner:

At your request, Terracon Consultants, Inc. (Terracon) has completed a Cultural Resources Desktop Assessment for the above-referenced site. These services were completed per the scope of services outlined in Terracon proposal P63150316 dated October 6, 2015.

### **Project Location and Information**

The site consists of four parcels: 117-04-214A (56 and 58 East 5th Street), 117-04-214B (529 North 7th Avenue), 117-04-214C (519 North 7th Avenue), and 117-04-2160 (546 North Stone Avenue). The parcels are in Tucson, Pima County, Arizona. The legal description is within the SE ¼ of the NW ¼ of Section 12 Township 14 South, Range 13 East (G&SRB&M), as depicted on the Tucson, Arizona 7.5-minute USGS topographic quadrangle. There are two existing structures on the parcels. One, a Quonset hut, is in the northeastern corner of parcel 117-04-214A; the other is the western half of the same parcel and extends south into the western portion of 117-04-214B. Current project plans are to demolish the building in the northeastern corner of parcel 117-04-214A, while the other structure will be retrofitted and incorporated into a new building.

### Class I - Records Review

Note: Information about archaeological sites and historic properties is considered sensitive. Please do not disseminate this information.

A Class I inventory consisting of a records review and site file check was conducted by consulting AZSITE, the online database maintained by the Arizona State Museum (ASM); General Land Office (GLO) historic-period maps; historic-period USGS topographic maps; and the National Register of Historic Places (NRHP) website. These sources were consulted in order to identify previous cultural resources projects, known prehistoric or historic-period sites, and historic properties listed on or eligible for listing on the NRHP within 150 feet of the subject parcels.

Terracon Consultants, Inc. 4685 S. Ash Ave. Suite H-4 Tempe. AZ 85282

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### Cultural Resources Desktop Assessment



7<sup>th</sup> Avenue Commons & Tucson, AZ January 11, 2016 & Terracon Project No. 63157136

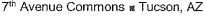
The records search identified eight projects within 150 feet of the parcels property (Table 1). These cultural resources projects were done in conjunction with utility projects, road development, and residential development. Four of the surveys have covered portions of the parcel west of Echols Avenue (117-04-2160). No archaeological sites or cultural resources have been recorded with the parcels' boundaries. One archaeological site and three historic districts listed on the NRHP have been recorded within a 150-foot radius of the parcels (Table 2). The site, AZ FF:9:17(ASM), is historic State Route 80, which in this area is North Stone Avenue. The West University Historic District includes parcels on the north side of East 5<sup>th</sup> Street, due north of the subject parcels. The Tucson Warehouse Historic District includes parcels at the northeast corner of North Stone Avenue and East 6<sup>th</sup> Street, just south of the subject parcels. The John Spring Neighborhood Historic District includes parcels west of the subject parcels, on the west side of North Stone Avenue

The GLO plats for Township 14 South, Range 13 East (1877) show no cultural resources in the subject property, although Tucson is established to the south. The Map of the City of Tucson with Additions in the lower left corner of the Official Map of Pima County (Roskruge 1893) shows the area between 7<sup>th</sup> and 8<sup>th</sup> Avenues and 5<sup>th</sup> and 6<sup>th</sup> Streets as a block numbered "58". The 1957 Tucson, AZ 7.5-minute topographic map does not show cultural features or buildings in the subject parcels; 1971 and 1975 photorevisions of the same map also do not show any features or buildings. Public information from the Pima County Assessor indicates that the buildings on parcels 117-04-214A and 117-04-214B were built in 1946. Cultural resources at least 50 years old may be eligible for listing on the NRHP.

Table 1. Previous projects conducted within a 150 feet of the subject property.

Project Number	Performing Institution	Description
1998-37.ASM	Desert Archaeology, Inc.	Cherry Avenue Main Survey (Vint 1998)
1999-587.ASM	SWCA	PBNS Level 3 Fiber Optic Line (Doak 1999)
1999-99.ASM	Desert Archaeology, Inc.	University Blvd./6th Ave. Main Survey (unknown)
2000-284.ASM	Desert Archaeology, Inc.	Moratorium Streets Survey (Diehl 2000)
2000-723.ASM	Western Cultural Resource Management, Inc.	AT&T NexGen/Core Project Link 3 Class 3 Survey (unkown)
2003-506.ASM	Desert Archaeology, Inc.	Stone Ave - 6th to 1st Assessment (Diehl 2003)
2004-679.ASM	Western Cultural Resource Management, Inc.	AT&T NexGen/Core Project (Baker 2004)
2009-848.ASM	SWCATUS	COT 09-44 Downtown Links (Tucker 2010)





January 11, 2016 # Terracon Project No. 63157136



Table 2. Previously Recorded Archaeological Sites within 150 feet of the subject property

Site Number	Site Type, Cultural and Temporal Affiliation, and Location	NRHP Eligibility
AZ FF:9:17(ASM)	SR-80, historic period roadway (Lindeman et at. 2012), located west of and adjacent to the subject parcels.	Determined eligible by SHPO in 2009
NPS80004240	West University Historic District, located north of the subject parcels.	NR-Listed in 1980
NPS97000886	Tucson Warehouse Historic District, located approximately 60 feet south of the subject parcels.	NR-Listed in 1999
NPS88002131	John Spring Neighborhood Historic District, located approximately 135 feet west of the subject parcels.	NR-Listed in 1989

### Conclusions

There are no known archaeological sites or historic properties that have been identified within the boundaries of the subject parcels but most of the parcels have never been subjected to a cultural resources inventory. One archaeological site and three historic districts are within a 150-foot radius of the subject parcels. AZ FF:9:17(ASM) is historic State Route 80. The three historic districts do not include any portions of the subject parcels. The existing buildings on parcels 117-04-214A and 117-04-214B were apparently built in 1946 and may be considered historic properties eligible for listing on the NRHP. Terracon understands, however, that SHPO recently visited the subject parcels and determined that the Quonset hut in the northeastern comer of parcel 117-04-214A is not eligible for inclusion on the NRHP because it has been moved from its original location. Arizona Revised Statute §41-865 provides protection for human remains and associated funerary objects older than 50 years that may be encountered on private lands.

Terracon appreciates the opportunity to be of continued service to Gardner Capital Development, LLC. If you have any questions or comments pertaining to the material presented herein, please contact the undersigned at (480) 897-8200 or (480) 897-1133 (facsimile).

Sincerely,

Terracon

Michael J. Boley

Senior Archaeologist

Mill of By

Nicholas Wahnefried Staff Archaeologist

Nich Valy

### Teracon

### Cultural Resources Desktop Assessment 7th Avenue Commons & Tucson, AZ January 11, 2016 & Terracon Project No. 63157136

### REFERENCES

### **AZSITE**

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### Diehl, Allison Cohen

2000 Cultural Resources Survey for the Moratorium Streets Cast-Iron Main Rehabilitation Project, Tucson, Pima County, Arizona. Project Report No. 00-134, Desert Archaeology, Inc., Tucson.

2003 Cultural Resources Survey along Stone Avenue Between 1st and 6th Streets, Tucson, Pima County, Arizona. Project Report No. 03-136. Desert Archaeology, Inc., Tucson.

### Doak, David P.

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2012 A Plan for Monitoring, Discovery, and Limited Data Recovery within City of Tucson right-of-way in Eleven Archaeological Sensitivity Zones in the City of Tucson. Report No. 2011-06. Desert Archaeology, Inc., Tucson.

### General Land Office (GLO)

1877 Survey plat of Township 14 South, Range 13 East, Gila-Salt River Meridian, approved by John Wasson, Surveyor General. U.S. Surveyor General's Office, Tucson, Arizona. Electronic map, http://www.glorecords.blm.gov/, accessed January 2015.

### Roskruge, George J.

1893 Official Map of Pima County, Arizona. Pima County Board of Supervisors. Tucson.

### Tucker, David B.

2010 Archaeological Records Search and Survey for the Downtown Link Acquisition, 527 and 529 North Stone Avenue, Tucson, Arizona. Letter Report dated January 15, 2010, SWCA Environmental Consultants, Tucson.

### United States Geological Survey (USGS)

1957 Tucson, Arizona [map]. 1:24,000, 7.5-minute series topographic quadrangle. U.S. Department of the Interior, U.S. Geological Survey, Washington D.C. Electronic map, available from the The National Map: Historical Topographic Map Collection, http://nationalmap.gov/historical, accessed January 2015.



Cultural Resources Desktop Assessment
7<sup>th</sup> Avenue Commons ■ Tucson, AZ
January 11, 2016 ■ Terracon Project No. 63157136

- 1971 Tucson, Arizona [map]. 1:24,000, 7.5-minute series topographic quadrangle. U.S. Department of the Interior, U.S. Geological Survey, Washington D.C. Electronic map, available from the The National Map: Historical Topographic Map Collection, http://nationalmap.gov/historical, accessed January 2015.
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### Vint, James M.

1998 Archaeological survey for the Eight Street/Cherry Avenue Cast Iron Main Replacement. Letter Report No. 98-114. Desert Archaeology, Inc., Tucson.



Biltform Architecture Group Jim Applegate 11460 N Cave Creek Rd #6 Phoenix, Arizona 85020 May 23, 2016

Dear Mr. Applegate:

### Re: NOISE STUDY FOR THE 7th AVENUE COMMONS

ACS has been retained to prepare a HUD Noise Study for the 7<sup>th</sup> Avenue Commons Apartments project located at 58 E 5<sup>th</sup> Street (Tucson, AZ).

To help achieve its national goal of "a decent home and suitable living environment for every American family," HUD is concerned with the projected future noise impact to the residential property. For the purpose of analysis, the *Noise Assessment Guidelines* require that you consider all military/civilian airports (with jet activity) within 15 miles of the project, all significant roads within 1000 feet and basically all railroads within 3000 feet.

HUD Regulations set forth the following exterior noise standards for new housing construction assisted or supported by the department:

### 65 Ldn\* or less - Acceptable

Exceeding 65 Ldn but not exceeding 75 Ldn - **Normally Unacceptable** (To achieve an acceptable status, appropriate sound attenuation measures must be provided)

### Exceeding 75 Ldn - Unacceptable

**Ldn** - Day Night average sound level (DNL) is the 24-hour average sound level, in decibels, obtained after the addition of 10 decibels to the sound levels occurring between 10:00 pm and 7:00 am.

HUD's regulations do not contain standards for interior noise levels. Rather a goal of 45 decibels is set forth and the attenuation requirements are geared toward achieving that goal. It is assumed that with standard construction, any building will provide sufficient attenuation so that if the exterior level is 65 Ldn or less, the interior level will be 45 Ldn or less.

### **PROJECT ASSUMPTIONS:**

ACS used the 2030 traffic projections provided by Pima Association of Governments (Pima) for this assessment. The following vehicle classification breakdown was used: 96% autos/light trucks; 2% medium trucks; 2% heavy trucks. The railroad information was provided by the US Department of Transportation. The Sun Link streetcar information was provided by the City of Tucson. The aircraft information was provided by each airport. (Note: Higher traffic levels will result in a higher potential noise impact.)

### PREVIOUS REPORT:

ACS reviewed Terracon Consultants' Noise Survey Report. Their results were based only on current noise level measurements and not future modeling per the HUD guidelines and methodology.

The HUD guidelines and methodology are based on future (10-15 years) typical traffic (aircraft, roadway, and railroad) noise. Current measurements (particularly over only a couple days) are almost always inappropriate for HUD use, and are certainly not preferred:

"calculated noise levels are really much better (than measured noise levels) for implementing HUD's noise policy."

"One thing noise measurements should not be used for is to confirm or refute calculated noise levels."

"calculated noise levels are more useful for HUD needs than measured levels for two significant reasons: The first is that with noise measurements you have no good way to take into account future changes in the future environment... The second reason why we prefer that you calculate noise levels is that through the calculation process you can use monthly or yearly data to determine traffic levels. Thus you come up with a more typical picture of the conditions."

ACS has projected the future potential noise impact to this project based on the HUD guidelines and methodology.

### **CALCULATION RESULTS:**

Railroad – The Union Pacific railroad is approximately 570' from the closest residential unit of this site. Additionally, ACS examined the potential noise impact from the Sun Links streetcar tracks to the east and to the south. The potential noise impact from rail activity is 69.3 Ldn. (See attached worksheets.)

Aircraft – ACS examined the potential noise impact created by the projected air traffic of Davis Monthan Air Force Base, Tucson International Airport, and Ryan Airfield. The noise created by the projected air traffic could impact this site by 55.1 Ldn. (See attached worksheets.)

Roadway - ACS examined the potential, future (2030) roadway noise impact from both Stone Avenue and 6<sup>th</sup> Street. The worst-case units could be impacted by as much as 66.7 Ldn. (See attached worksheets.)

Combined – The combined (roadway, railroad and aircraft) potential noise impact is 71.3 Ldn. Since this is a multi-story project, a barrier wall of reasonable height will not provide adequate noise reduction. To comply with HUD Acceptable Standards the exterior construction must reduce the total exterior noise level so that the interior noise level is  $\leq$  45 Ldn. (See Interior *Noise Level* section below.)

### Interior Noise Level

The calculated potential exterior noise impact to the worst-case units is 71.3 Ldn. To comply with HUD's interior standards (≤ 45 Ldn), the exterior construction of these buildings would need to provide a Noise Level Reduction (NLR) 27 or higher.

The Noise Level Reduction was calculated using the transmission loss values of the various elements of the project's construction. These values were weighted based on the percentage of surface area each element comprises of this plan. ACS has been informed that dual-pane windows will be used for this project, but the exact manufacturer and models have not yet been selected. Typical dual-pane window are rated STC 28-33. To be conservative, ACS used an isolation rating of STC 28 for these calculations:

Elevation	NLR
South	32.4
North	33.1
East	33.8
West	32.8

In all cases, the Noise Level reduction exceeded the required NLR 27 by a "clearly noticeable" amount. This allows compliance with HUD "Acceptable" interior standards.

### COMMENTS/RECOMMENDATIONS:

- To comply with HUD's interior standards (≤ 45 Ldn), the exterior construction of this building would need to provide a Noise Level Reduction (NLR) 27 or higher. In all cases, the Noise Level reduction exceeded the requirement by at least 5 decibels. A 5 decibel improvement is classified as "clearly noticeable". This easily allows compliance with HUD "Acceptable" interior standards.
- 2) NOTE: The noise projections contained within this report are based on "typical", future traffic sources (as required by the HUD methodology). ACS is unaware of any other noise sources (aside from those listed above) that might impact this project. If you are aware of any other potential noise sources, please contact ACS for further analysis.

Please let me know if you have any questions or need additional information.

Respectfully,

Tony Sola

**Acoustical Consulting Services** 

Norksheet A Site Evaluation		Noise Assessment Guidelines
Site Location 58 E 5 <sup>th</sup> Street		NOTES CO. 11 (1) (1) (1) (1) (1) (1) (1) (1) (1)
Program		
Project Name	<del></del>	
7 <sup>th</sup> Ave Commons		
Locality		
Tucson, AZ		
File Number		
Sponsor's Name		Phone
Gardner Capital Development, LLC		314-561-5900
Street Address		City, State
8000 Maryland Ave, Suite 910		Clayton, MO 63105
Acceptability Category	DNL	Predicted for Operations in Year
1. Roadway Noise	66.7	2030
2. Aircraft Noise	55.1	
3. Railway Noise	69.3	AND APPEAR OF THE PARTY OF THE
Value of DNL for all noise sources:	71.3	
Final Site Evaluation (Circle One)		
Acceptable		
Normally Unacceptable - Will be acceptable	ole with addition	nal "noise attenuation measures" (Se
Unacceptable		
Signatura		
Signature		Date <u>5/23/16</u>

Clip this worksheet to the top of a package containing Worksheets B-E and Workcharts 1-7 that are used in the site evaluations.

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### **Noise Assessment Guidelines**

1.	·	within 15 miles of Monthan Air For					
2.		n International A					
3.		Airfield					
4.		- Timela					
7.							
Neces	sary info	rmation:		Airport 1	Airport 2	Airport 3	Airport 4
1.	Are DN (yes/no		contours available?	Yes	Yes	Yes	
2.	Any Su (yes/no	ipersonic aircraft o)	operations?	Maybe	No	<u>No</u>	
3.	Estima	ting approximate	contours from Figure 3:				
	a.	Number of nigh	ttime jet operations				
	b.	Number of day	ime jet operations				
	C.	Effective number (10 times a + b	er of oprations )	<b></b>		<del> </del>	
	d.	Distance A for	65 dB				
			70 dB				
			75dB			***************************************	
	e.	Distance B for	65 dB				<del>pages a mineral</del>
			70 dB		***************************************		
			75dB				
4.	Estima	ting DNL from Ta	able 2:				, , , , , , , , , , , , , , , , , , , ,
	a.	Distance from 6 flight path, D1	65 dB contour to	1.8 Mi	1.25 Mi	0.5 Mi	
	b.	Distance from I	NAL to flight path,	6.5 Mi	8.1 Mi	13.5 Mi	- 100 100
	C.	D <sup>2</sup> divided by D	1				<u>.</u>
	d.	DNL		53.8	48.8	36.4	
5.	Operat	ions projected fo	r what year?	-	•		
6.	Total D	NL from all airpo	orts		55.1		
Signat	ure	Toys	o la		Date _5/23/1	6	

### Worksheet C Roadway Noise

### Page 1

**Noise Assessment Guidelines** 

List all major roads within 1000 feet of the site:

Road #1			
Vehicle Type	Cars 🗹	Medium Trucks 🗹	Heavy Trucks ₹
Effective Distance	250	250	250
Distance to Stop Sign			
Average Speed	30	30	30
Average Daily Trips (ADT)	42683	889	669
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	58.8	42	62.3
Calculate Road #1 DNL	64	Reset	

ar from the transfer to		
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1 5 5 65 W 11 A		
11/2/15/04 18 TO		
11746		
BB STRINGS		

### Road #2

Vehicle Type	Cars 🕏	Medium Trucks	Heavy Trucks 🕏
Effective Distance	270	270	270
Distance to Stop Sign	AND		
Average Speed	30	][30	30
Average Daily Trips (ADT)	40842	851	851
Night Fraction of ADT	15	15	15
Road Gradient (%)			The state of the s
Vehicle DNL	58.1	41.3	61.6
Calculate Road #2 DNL	63.3	Reset	•

-American Contraction of the Con		
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1,22		-~-E
السيخي		

Signature

...<u>....</u>

Date \_\_\_\_\_5/23/16

### Worksheet D Railway Noise

List all railways within 3000 feet of the site:

Relegad #1 Bend dentifier	inion Profic	3 .
R#8#1		
Trein Type	Electric ii	Sere V
Effective Distance		
Average Train Speed		Section of the Control of the Contro
		=======================================
Brightes per Trans		
Railway care per Train		EC
Average Total Queresions (970)		45
ಹೀತ್ರಗಿಗೆ Fraction ನ್ ಸಿನ್		<b>=</b>
Refue states otteral	Yest No.	Sep ( 90 No. ( 5)
Edited Tracket	Yes 1 No.	Nest W. Not Cr
Train 2541		65.2
Descripte Restal CNL	55.3	Reset
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Relinated \$1 Treak identifier;	14. 14. 14. 14. 14. 14. 14. 14. 14. 14.	
节26年至		
Train Tros	Electric M	Distall is
Effective Distance	(487	
Average Train Epsec		
	L	
日が記される Oer Texts	£	
নিপ্তালু কেন্দ্ৰ ক্লাট উচ্চাল		
Average Train Coerations (ATC)	242	
Night Francisco of ATO	\$	
	Yes: ( ) Ac: (	Year No.
Solved Tracket	Yesyff Acidi	Nest: Nest:
Total ENL	4.美術	
Carthair Ball #2 DWL		[Sedes]
<u> </u>	Marian and a second	Farmer and the State of State
Fairped #3 Track Identifier	santana di manana di Santana di Manana di	
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Average Train Spread	30 1	yang menganganyan dalah Tanggan
Singlines ber Treift	*	
Ratively cass per Train	5	
Average Train Operations (ACB)	Z-Z	
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Relivey whiches or home?	Yes: III No-W	State Control
Bolled Tracks 7	Mass Will Mass III	West of National
Train DML	40.9	
Deloutere Reit \$5 DNU	\$0.8°	Saget
		()

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### Figure 19 Description of Noise Attenuation Measures (Acoustic Construction)

Part 1	
Project Name	7th Avenue Commons
Location	Tucson, AZ
Sponsor/Develo	oper Gardner Capital Development, LLC
Noise Level (Fro	om NAG) 71.3 Attenuation Required 27
Primary Noise S	Source(s) Union Pacific Railroad
Part II	
1. For wal	II(s) facing and parallel to the noise source(s) (or closest to parallel):
a.	Description of wall construction Stucco wall (or better)
b.	STC rating for wall (rated for no windows or doors): 46 minimum
C.	Description of windows: Dual Pane and Sliding Glass Doors
d.	STC rating for window type 28 - 34 (the minimum rating of 28 was used)
e.	Description of doors French
f.	STC rating for doors 26
g.	Percentage of wall (per wall, per dwelling unit) composed of Windows 35.2% and doors 0%
h.	Combined STC rating for wall component 32.4
2. For wal	lls perpendicular to noise source(s):
a.	Description of wall construction (Same As Above)
b.	STC rating for wall (rated for no windows or doors): 46
C.	Description of windows: (Same As Above)
d.	STC rating for window type 28
e.	Description of doors (Same As Above)

	f.	STC rating for doors						
	g.	Percentage of wall (per wall, per dwelling unit) composed of Windows 15.8% and doors 9.9%						
	h.	Combined STC rating for wall component 32.8						
3.	Roofing component (if overhead attenuation is required due to aircraft noise):							
	a.	Description of roof construction N/A						
	b.	STC rating (rated as if no skylights or other openings):						
	c.	Description of skylights or overhead windows:						
	d.	STC rating for skylights or overhead windows						
	e.	Percentage of roof composed of skylights or windows (per dwelling unit)						
	f.	Percentage of roof composed of large uncapped openings such as chimneys						
	g.	Combined STC rating for roof component						
4.	Descrip	otion of type of mechanical ventilation provided N/A						
Pre	pared B	ly: Toy Sola						
Dat	e:	5/23/16						

Worksheet A Site Evaluation		Noise Assessment Guidelines			
Site Location 58 E 5 <sup>th</sup> Street	<u>- 32 ma</u>	STREET, ST. A. S.			
Program					
Project Name					
7 <sup>th</sup> Ave Commons					
Locality					
Tucson, AZ					
File Number	10-301-30				
Sponsor's Name			Phone		
Gardner Capital Dev	elopment, LLC		314-561-5900		
Street Address			City, State		
8000 Maryland Ave,	Suite 910		Clayton, MO 63105		
	cceptability ategory	DNL	Predicted for Operations in Year		
1. Roadway Noise		66.7	2030		
2. Aircraft Noise		55.1			
3. Railway Noise		69.3			
Value of DNL for all nois	e sources:	71.3			
Final Site Evaluation (Ci	rcle One)				
Acceptable					
Normally Unacceptable	> - Will be accepta	ble with addition	al "noise attenuation measures" (Se		
Unacceptable					
Signature	Sola		Date 5/23/16		

Clip this worksheet to the top of a package containing Worksheets B-E and Workcharts 1-7 that are used in the site evaluations.

26 74

### **Noise Assessment Guidelines**

List all	airports	within 15 miles o	of the site:				-			
1.	Davis									
2.	Tucso									
3.	3. Ryan Airfield									
4.										
Neces	sary info	rmation:		Airport 1	Airport 2	Airport 3	Airport 4			
1.	Are DN (yes/no		contours available?	Yes	Yes	Yes				
2.	Any Su (yes/no	personic aircraft b)	operations?	<u>Maybe</u>	No	_No	<u>1</u>			
3.	Estima	ting approximate	contours from Figure 3	:						
	a.	Number of nigh	ttime jet operations							
	b.	Number of dayt	ime jet operations							
	C.	Effective number (10 times a + b)	er of oprations )							
	d.	Distance A for	65 dB							
			70 dB							
			75dB			M.B. 41				
	e.	Distance B for	65 dB							
			70 dB							
			75dB							
4.	Estima	ting DNL from Ta	able 2:			***************************************				
	a.	Distance from 6 flight path, D1	55 dB contour to	1.8 Mi	1.25 Mi	0.5 Mi				
	b.	Distance from ND <sup>2</sup>	NAL to flight path,	6.5 Mi	8.1 Mi	13.5 Mi				
	C.	D <sup>2</sup> divided by D	1	· · · · · · · · · · · · · · · · · · ·						
	d. DNL			53.8	48.8	36.4				
5.	Operat	ions projected fo	r what year?							
6.	Total DNL from all airports				55.1					
		Ton E	o Qu							
Signat	ure	3/3			Date <u>5/23/1</u>	6				

List all major roads withi	n 1000 feet of th	ne site:	
Road # 1 Name: Stor	e Ave		mister en militar en state de la companya en march
Road #1			
Vehicle Type	Cars 🗭	Medium Trucks 🕏	Heavy Trucks ₹
Effective Distance	250	250	250
Distance to Stop Sign	Annual Control of States and Annual Control o		
Average Speed	30	30	30
Average Daily Trips (ADT)	42683	889	889
Night Fraction of ADT	15	15	15
Road Gradient (%)		G	
Vehicle DNL	58.8	42	62.3
Calculate Road #1 DNL	64	Reset	
Road # 2 Name: 6th !	Street		
Road #2	iineni te eeliiineete.		
Vehicle Type	Cars <b>ヹ</b>	Medium Trucks ₹	Heavy Trucks ₹
Effective Distance	270	270	270
Distance to Stop Sign		A single form of a second and a second of	
Average Speed	30	30	30
Average Daily Trips (ADT)	40842	851	851
Night Fraction of ADT	15	15	15
Road Gradient (%)	:		Ō
Vehicle DNI		413	

Reset

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Signature 29

Calculate Road #2 DNL

Date <u>5/23/16</u>

## Worksheet D Railway Noise

Page 1

List all railways within 3000 feet of the site:

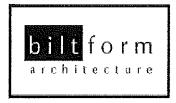
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%4R#2		
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Effective Distance	243	
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Astrong dars per Train	2	
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Date <u>5/23/16</u>

Part 1		
Project Name _	7th Avenue Commons	
Location Tucson, AZ		
Sponsor/Develo	per Gardner Capital Development, LLC	
Noise Level (From NAG) 71.3 Attenuation Required 27		
Primary Noise Source(s) Union Pacific Railroad		
Part II		
1. For wall	(s) facing and parallel to the noise source(s) (or closest to parallel):	
a.	Description of wall construction Stucco wall (or better)	
b.	STC rating for wall (rated for no windows or doors): 46 minimum	
C.	Description of windows: Dual Pane and Sliding Glass Doors	
d.	STC rating for window type 28 - 34 (the minimum rating of 28 was used)	
e.	Description of doors French	
f.	STC rating for doors 26	
	Percentage of wall (per wall, per dwelling unit) composed of Windows 35.2% and doors 0%	
h.	Combined STC rating for wall component 32.4	
2. For wall	s perpendicular to noise source(s):	
a.	Description of wall construction (Same As Above)	
b.	STC rating for wall (rated for no windows or doors): 46	
C.	Description of windows: (Same As Above)	
d.	STC rating for window type	
e.	Description of doors (Same As Above)	

	f.	STC rating for doors		
	g.	Percentage of wall (per wall, per dwelling unit) composed of Windows 15.8% and doors 9.9%		
	h.	Combined STC rating for wall component 32.8		
3.	Roofing	g component (if overhead attenuation is required due to aircraft noise):		
	a.	Description of roof construction N/A		
	b.	STC rating (rated as if no skylights or other openings):		
	C.	Description of skylights or overhead windows:		
	d.	STC rating for skylights or overhead windows		
	e.	Percentage of roof composed of skylights or windows (per dwelling unit)		
	f.	Percentage of roof composed of large uncapped openings such as chimneys		
	g.	Combined STC rating for roof component		
4.	Descrip	otion of type of mechanical ventilation provided N/A		
Pre	epared B	y: Toy Sola		
Dat	:e:	5/23/16		



May 24, 2016

Glenn Fournie, Project Coordinator Housing & Community Development City of Tucson 310 North Commerce Park Loop Tucson, Arizona 85745

Re:

7<sup>th</sup> Avenue Commons/Affordable Housing Community

**HUD Environmental Assessment** 

Mr. Fournie:

Biltform Architecture Group, Inc. is the Project Architect for the 7<sup>th</sup> Avenue Commons affordable housing community.

We have reviewed the Noise Study and HUD Noise Worksheets prepared by Acoustical Consulting Services, dated May 23, 2016 (together referred to in this letter as the "ACS Noise Study").

As Project Architect, we will assure that the plans for the project include the recommendations in the ACS Noise Study, including, specifically (and without limitation):

- 1. <u>Windows.</u> Dual-pane windows that are rated STC 28-33 (or higher), with an isolation rating of STC 28 (or higher).
- 2. Exterior Wall Systems. To comply with HUD's interior standards (< 45 Ldn), the exterior construction of this building would need to provide a Noise Level Reduction (NLR) 27 or higher. Stucco wall (or better). STC rating for wall (rated for no windows or doors): 46 minimum. Percentage of wall (per wall, per dwelling unit) composed of Windows 35.2%. Combined STC rating for wall component 32.4.</p>
- 3. For walls perpendicular to noise source(s). Same as above for Exterior Wall Systems, plus: Percentage of wall (per wall, per dwelling unit) composed of Windows 15.8% and doors 9.9%. Combined STC rating for wall component 32.8.
- 4. <u>Studs.</u> The minimum STC rating of 46 for the wall assembly assumes 2x4 studs, and 2x4 studs will be used in the project. Note that sound transmits through the weak-points. The windows are rated STC 28; the wall STC 46. Virtually all of the noise will transmit through the windows. Improving the isolation quality of the wall will not improve the composite isolation rating of the assembly.

5. <u>Insulation.</u> Insulation provides a noticeable improvement in the isolation quality of the wall assembly. Virtually all insulation options provide the same improvement. Typical batt insulation will be acceptable and will be included in the plans.

Please do not hesitate to contact me directly, if you have any questions.

Thank you,

Dennis J. Applegate, Principal

biltform architecture group of companies

**Enclosure** 

cc: Reid Butler, Butler Housing Company, Inc.

Scot Puffer, Gardner Capital Development Arizona, LLC

Tony Sola, Acoustical Consulting Services

Tony McCardell, Terracon



Biltform Architecture Group Jim Applegate 11460 N Cave Creek Rd #6 Phoenix, Arizona 85020

May 23, 2016

Dear Mr. Applegate:

## Re: NOISE STUDY FOR THE 7th AVENUE COMMONS

ACS has been retained to prepare a HUD Noise Study for the 7<sup>th</sup> Avenue Commons Apartments project located at 58 E 5<sup>th</sup> Street (Tucson, AZ).

To help achieve its national goal of "a decent home and suitable living environment for every American family," HUD is concerned with the projected future noise impact to the residential property. For the purpose of analysis, the *Noise Assessment Guidelines* require that you consider all military/civilian airports (with jet activity) within 15 miles of the project, all significant roads within 1000 feet and basically all railroads within 3000 feet.

HUD Regulations set forth the following exterior noise standards for new housing construction assisted or supported by the department:

65 Ldn\* or less - Acceptable

Exceeding 65 Ldn but not exceeding 75 Ldn - **Normally Unacceptable** (To achieve an acceptable status, appropriate sound attenuation measures must be provided)

Exceeding 75 Ldn - Unacceptable

\*Ldn - Day Night average sound level (DNL) is the 24-hour average sound level, in decibels, obtained after the addition of 10 decibels to the sound levels occurring between 10:00 pm and 7:00 am.

HUD's regulations do not contain standards for interior noise levels. Rather a goal of 45 decibels is set forth and the attenuation requirements are geared toward achieving that goal. It is assumed that with standard construction, any building will provide sufficient attenuation so that if the exterior level is 65 Ldn or less, the interior level will be 45 Ldn or less.

## PROJECT ASSUMPTIONS:

ACS used the 2030 traffic projections provided by Pima Association of Governments (Pima) for this assessment. The following vehicle classification breakdown was used: 96% autos/light trucks; 2% medium trucks; 2% heavy trucks. The railroad information was provided by the US Department of Transportation. The Sun Link streetcar information was provided by the City of Tucson. The aircraft information was provided by each airport. (Note: Higher traffic levels will result in a higher potential noise impact.)

## PREVIOUS REPORT:

ACS reviewed Terracon Consultants' Noise Survey Report. Their results were based only on current noise level measurements and not future modeling per the HUD guidelines and methodology.

The HUD guidelines and methodology are based on future (10-15 years) typical traffic (aircraft, roadway, and railroad) noise. Current measurements (particularly over only a couple days) are almost always inappropriate for HUD use, and are certainly not preferred:

"calculated noise levels are really much better (than measured noise levels) for implementing HUD's noise policy."

"One thing noise measurements should not be used for is to confirm or refute calculated noise levels."

"calculated noise levels are more useful for HUD needs than measured levels for two significant reasons: The first is that with noise measurements you have no good way to take into account future changes in the future environment... The second reason why we prefer that you calculate noise levels is that through the calculation process you can use monthly or yearly data to determine traffic levels. Thus you come up with a more typical picture of the conditions."

ACS has projected the future potential noise impact to this project based on the HUD guidelines and methodology.

## **CALCULATION RESULTS:**

Railroad – The Union Pacific railroad is approximately 570' from the closest residential unit of this site. Additionally, ACS examined the potential noise impact from the Sun Links streetcar tracks to the east and to the south. The potential noise impact from rail activity is 69.3 Ldn. (See attached worksheets.)

Aircraft – ACS examined the potential noise impact created by the projected air traffic of Davis Monthan Air Force Base, Tucson International Airport, and Ryan Airfield. The noise created by the projected air traffic could impact this site by 55.1 Ldn. (See attached worksheets.)

Roadway - ACS examined the potential, future (2030) roadway noise impact from both Stone Avenue and 6<sup>th</sup> Street. The worst-case units could be impacted by as much as 66.7 Ldn. (See attached worksheets.)

Combined – The combined (roadway, railroad and aircraft) potential noise impact is 71.3 Ldn. Since this is a multi-story project, a barrier wall of reasonable height will not provide adequate noise reduction. To comply with HUD Acceptable Standards the exterior construction must reduce the total exterior noise level so that the interior noise level is  $\leq$  45 Ldn. (See Interior *Noise Level* section below.)

## Interior Noise Level

The calculated potential exterior noise impact to the worst-case units is 71.3 Ldn. To comply with HUD's interior standards (≤ 45 Ldn), the exterior construction of these buildings would need to provide a Noise Level Reduction (NLR) 27 or higher.

The Noise Level Reduction was calculated using the transmission loss values of the various elements of the project's construction. These values were weighted based on the percentage of surface area each element comprises of this plan. ACS has been informed that dual-pane windows will be used for this project, but the exact manufacturer and models have not yet been selected. Typical dual-pane window are rated STC 28-33. To be conservative, ACS used an isolation rating of STC 28 for these calculations:

Elevation	NLR
South	32.4
North	33.1
East	33.8
West	32.8

In all cases, the Noise Level reduction exceeded the required NLR 27 by a "clearly noticeable" amount. This allows compliance with HUD "Acceptable" interior standards.

## COMMENTS/RECOMMENDATIONS:

- 1) To comply with HUD's interior standards (≤ 45 Ldn), the exterior construction of this building would need to provide a Noise Level Reduction (NLR) 27 or higher. In all cases, the Noise Level reduction exceeded the requirement by at least 5 decibels. A 5 decibel improvement is classified as "clearly noticeable". This easily allows compliance with HUD "Acceptable" interior standards.
- 2) NOTE: The noise projections contained within this report are based on "typical", future traffic sources (as required by the HUD methodology). ACS is unaware of any other noise sources (aside from those listed above) that might impact this project. If you are aware of any other potential noise sources, please contact ACS for further analysis.

Please let me know if you have any questions or need additional information.

Respectfully,

Tony Sola

**Acoustical Consulting Services** 

Downtown C O



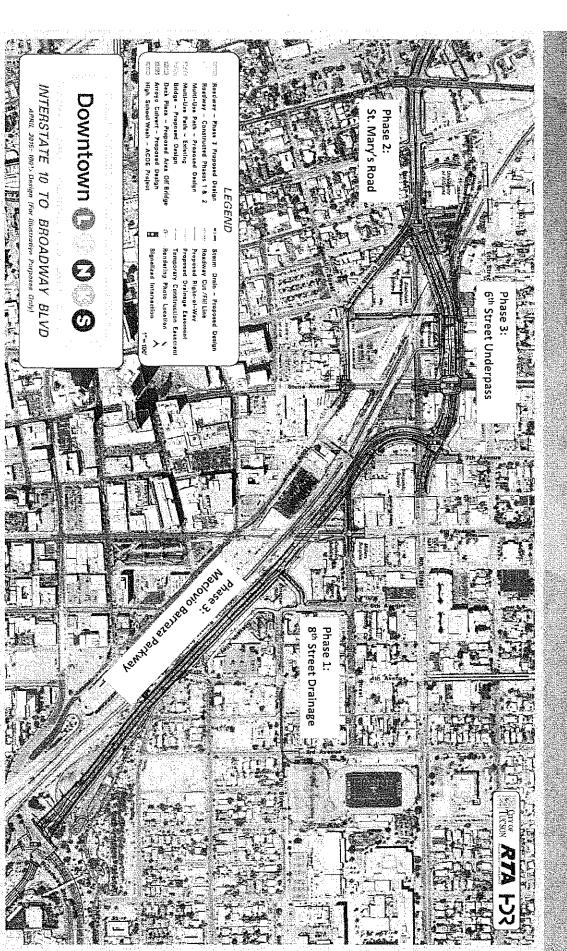




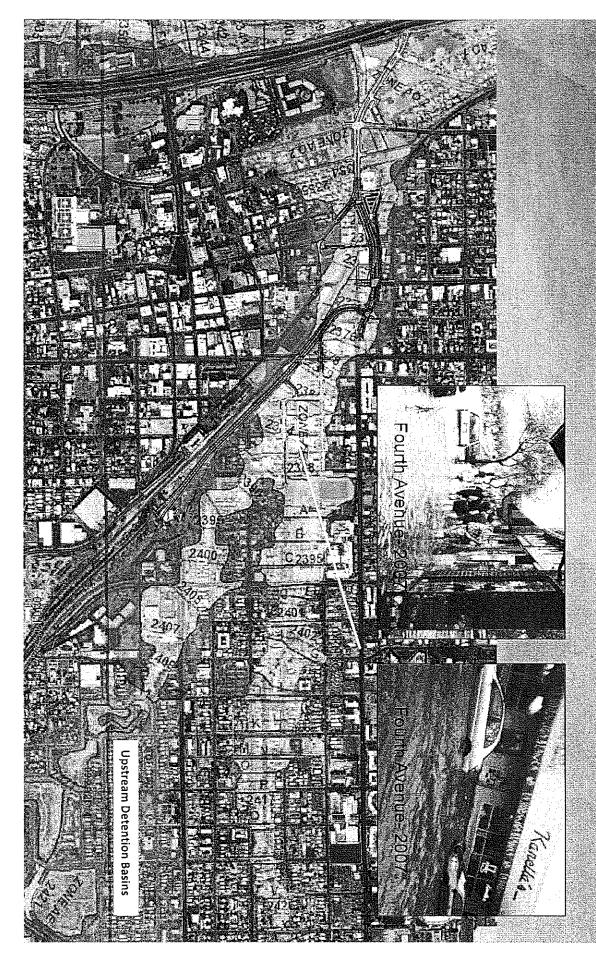




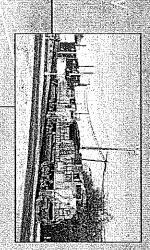




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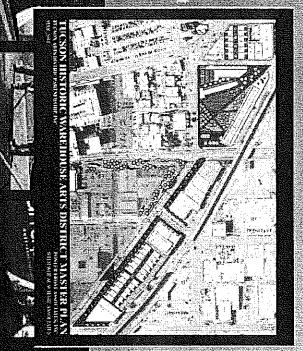
- environmental clean-up of inclusing to openies

## Encountage Coold Land Use Redevelopment - Historic preservation and revietization adjacent to project

- Stemfeld, Cilizens Toole Ave, warehouses preserved
- Creation of an Infill Incentive District (IIII)



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- Waldlowie Barraza Parintavioridoe over 611 Avalue Element
- SIII Avenue Deck Pleza will pulolic space lentiscaping, and
- Warrye desert lamoscaping and passive water harvesting
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Phase IIII Church Ave to Shoedway

August 2015: Complete 100% Plans, 585 Sheets!

Early-Mid 2016: Complete properly acquisitions, demotions, diffiviretocation.

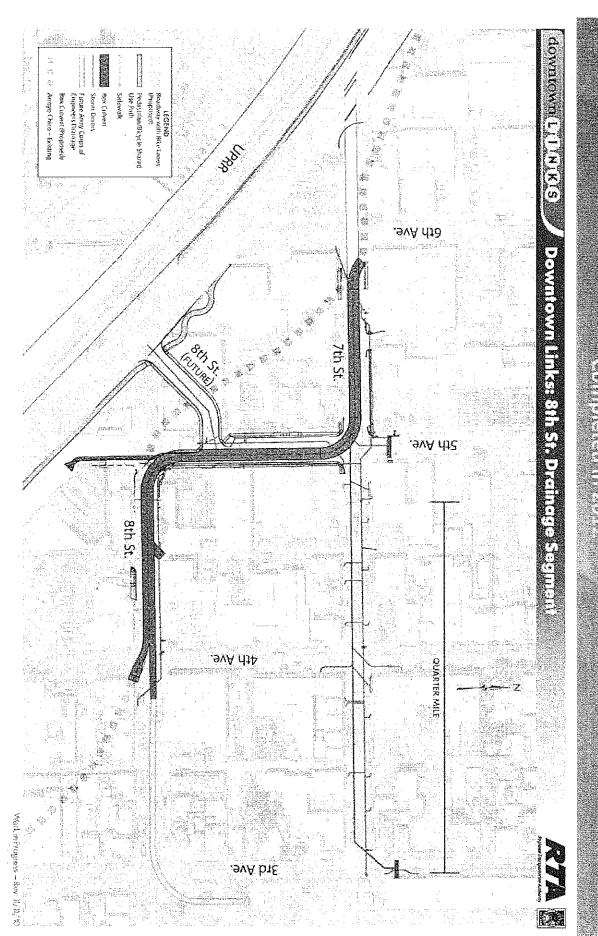
Mid 2016: Begin major construction that will last 24-30 months.

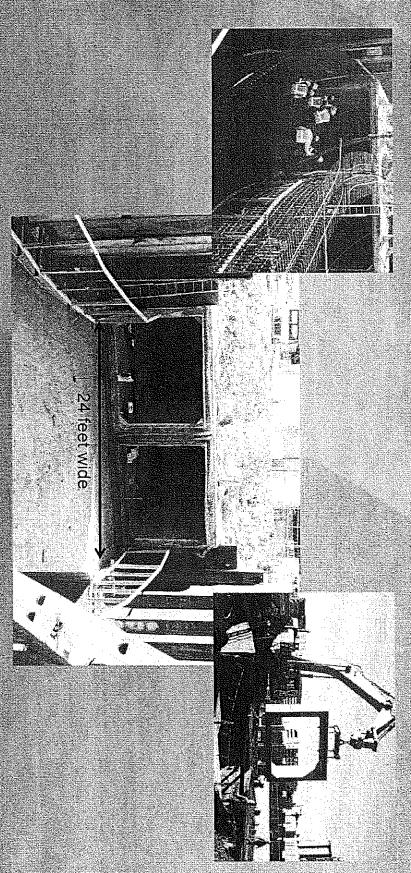






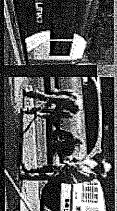
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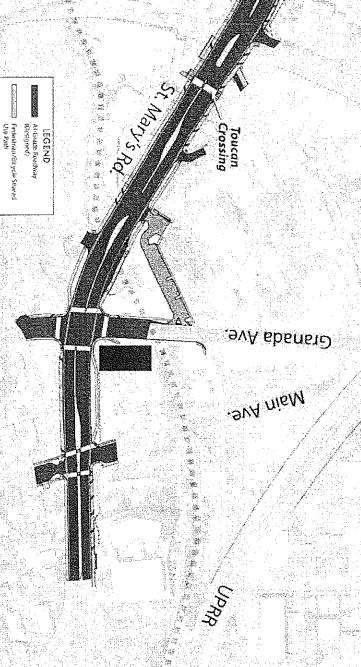








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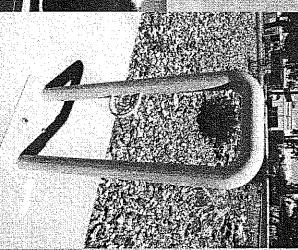




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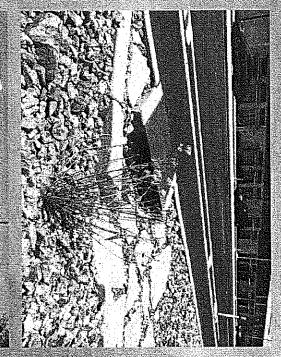


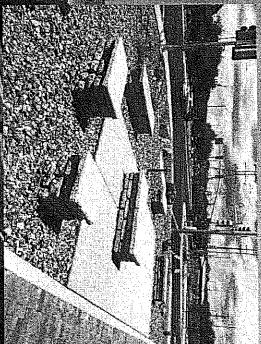


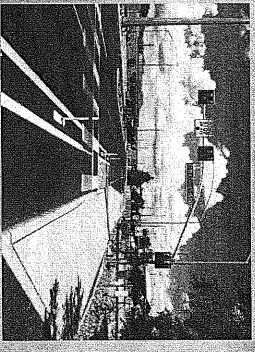


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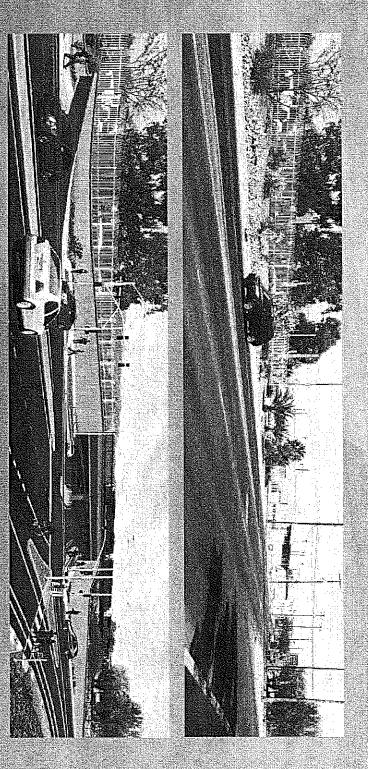






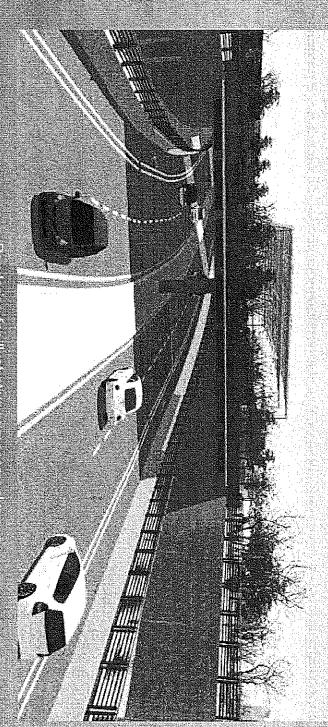








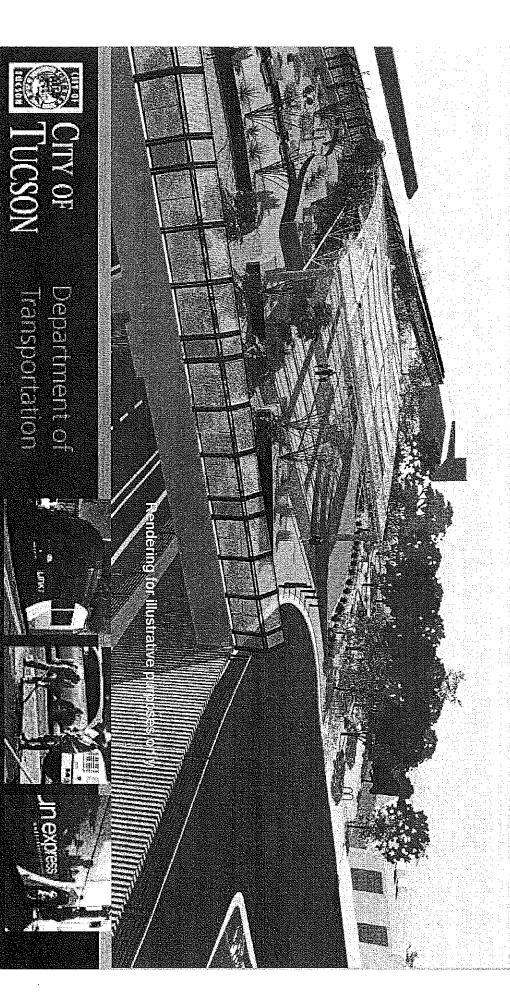


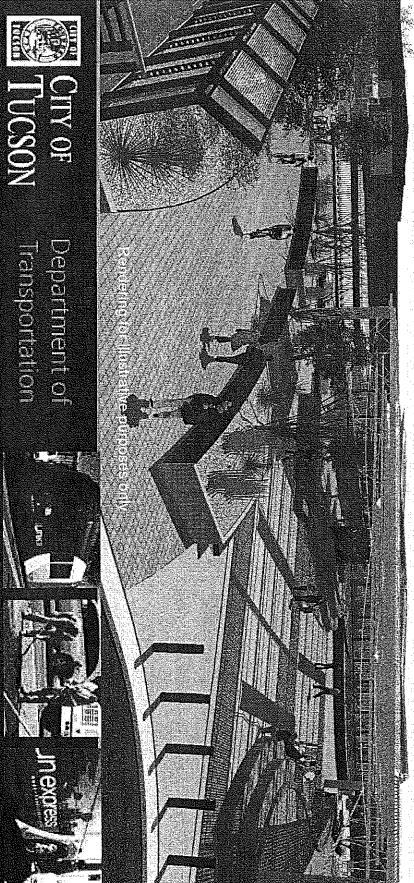


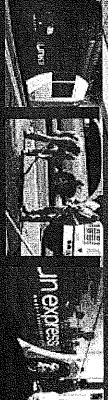


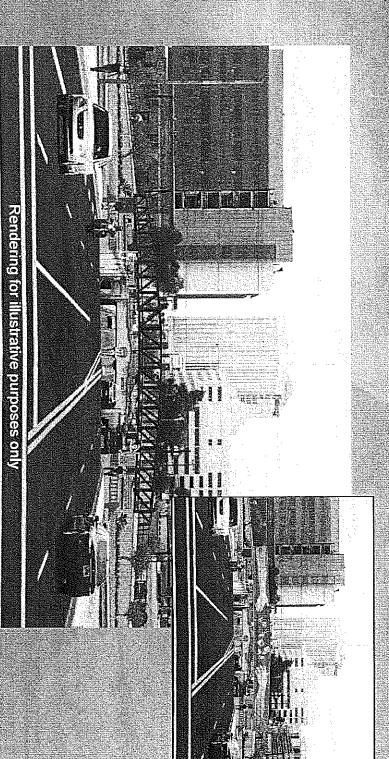




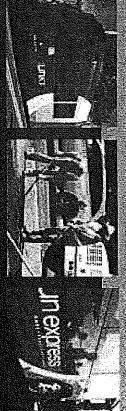










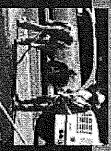




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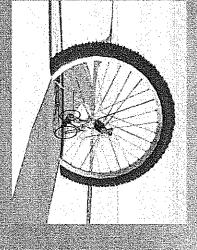


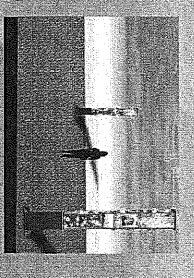


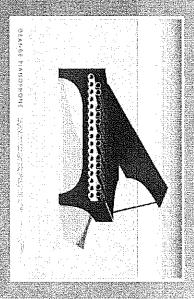
intersection. Working with PAG. Re-design being considered to narrow the

















Property demolitions demulary-tune New poles and lines.

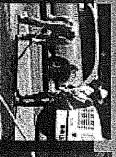
Property demolitions demulary-tune

Other fiber communications to begin relocations in Summer.

Phase III major construction — Summer Fall





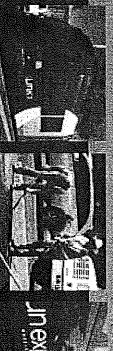




www.downtownlinks.info

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## PARTIAL

## Phase I Environmental Site Assessment

5<sup>th</sup> - 7<sup>th</sup> Center

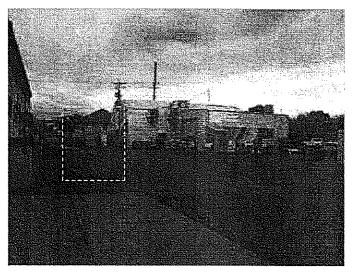
58 East 5th Street

APNs 117-04-214A, -214B, -214C, and -2160

Tucson, Pima County, AZ

February 27, 2015

Terracon Project No. 63157026



Prepared for: Gardner Capital Development, LLC St. Louis, Missouri

ADDENDUM 6/3/15

Prepared by: Terracon Consultants, Inc. Tucson, Arizona

terracon.com

Terracon

Environmental

**Facilities** 

.

Geotechnical

4

Materials

February 27, 2015



Gardner Capital Development, LLC 800 Maryland Avenue Suite 910 St. Louis, MO 63105

Attn:

Michael Gardner

P: (314) 561-5900

E: michael@gardnercapital.com

Re:

Phase I Environmental Site Assessment

5<sup>th</sup> – 7<sup>th</sup> Center 58 East 5th Street

APNs 117-04-214A, -214B, -214C, and -2160

Tucson, Pima County, Arizona Terracon Project No. 63157026

Dear Mr. Gardner:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Phase I Environmental Site Assessment (ESA) report for the above-referenced site. This assessment was performed in accordance with Terracon Proposal No. P65150072.

We appreciate the opportunity to be of service to you on this project. In addition to Phase I services, our professionals provide geotechnical, environmental, construction materials, and facilities services on a wide variety of projects locally, regionally and nationally. For more detailed information on all of Terracon's services please visit our website at <a href="https://www.terracon.com">www.terracon.com</a>. If there are any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us at 520.794.4846 (Kevin) or 602.239.4841 (Dave).

Sincerely,

Terracon Consultants, Inc.

Kevin T. Woner

Project Environmental Scientist

Hawkinson, CHMM

Environmental Department manager

Senior Associate

Terracon Consultants Inc. 355 S, Euclid, Suite 107 Tecson, AZ 86719 P 520-776-1789 F 520-792-2539 terracon.com

4.7

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APPENDIX B	Description of Terms and Acronyms
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APPENDIX D	Environmental Database Information
APPENDIX E	Site Photographs
APPENDIX F	Credentials

5th – 7th Center ≋ Tucson, AZ
February 27, 2015 ≋ Terracon Project No. 63157026



# **EXECUTIVE SUMMARY**

This Phase I Environmental Site Assessment (ESA) was performed in accordance with Terracon Proposal No. P65150072, and was conducted consistent with the procedures included in ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The ESA was conducted under the supervision or responsible charge of David M. Matson, Environmental Professional. Kevin T. Woner performed the site reconnaissance on February 24, 2015.

# **Findings**

A summary of findings is provided below. It should be recognized that details were not included or fully developed in this section and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

#### Site Description and Use

The site is approximately 1.5 acres in size and is comprised of four parcels. The portion of the site identified with Pima County parcel number 117-04-214A (56 and 58 East 5 th Street) was develop with an approximate 3,400 square foot (SF) Quonset building on the northeast corner in 1946 and an approximate 6,690 SF building on the northwest portion in 1946. The portion of the site identified with Pima County parcel number 117-04-214B (529 North 7 th Avenue) was develop with an approximate 1,750 SF building at the middle of the site in 1946. The portions of the site identified with Pima County parcel numbers 117-04-214C (519 North 7 th Avenue) and 117-04-2160 (546 North Stone Avenue) are currently vacant gravel covered lots. North Echols Avenue leads between parcels 117-04-214A (west portion) and 117-04-2160 (east portion).

The building on the northwest portion of the site is used by Wet-Media, Inc., a provider of world-wide social networking sites. In addition, the building is used by several local artists as studio and display space. The types of art produced at the site include paintings, weaving, ceramics and digital photography. The building on the northeast portion of the site is used as a wooden furniture manufacturing shop and as an artistic clay figure studio and manufacturing shop with electric and natural gas fired kilns. The wooden furniture manufacturing shop has a spray booth for the application of wood finishes including stain and lacquer. Small quantities of the lacquer and stain are purchased on an as needed basis and no large quantities are stored on the site. Liquid wastes generated from the finishing process and cleaning of the spray guns reportedly either volatilize or are cleaned-up using rags which are disposed in the dumpster.

#### Historical Information

Based on a review of the historical information, the site was developed with residential structures as far back as the early 1900s. By the early 1930s, retail businesses including a grocery store, auto repair shops and transportation facilities were on the site. The existing structures on the northeast and northwest portions of the site were constructed in 1946 and were used as auto



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repair, auto freight and warehouse facilities through the mid-1980s. Structures on the southernmost portion of the site were removed in the late 1960s and the structures on the westernmost portion of the site were removed in early-2000. The historic uses as auto repair and transportation facilities represent a REC to the site.

In addition, gasoline USTs were historically located on the site. Records obtained from the City of Tucson Development Services Department indicate that in 1956 a 1,000-gallon gasoline UST was replaced with two 2,000-gallon gasoline USTs. The EDR Report did indicate that three USTs were removed in 1986 and one UST was removed in 1987. Complete records of the removal and subsequent closure assessment soil sampling for these USTs were not found. These former USTs represent a REC to the site.

The ADEQ was contacted on February 24, 2015 to perform a records search regarding environmental records or information indicating environmental concerns including possible LUSTs incidents and USTs registered for the site. Terracon has not received a reply from the ADEQ at the time of the issuance of this report. Should information of environmental significance be found, an addendum will be issued to this report.

#### Records Review

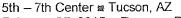
Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed. The site was identified in the UST and Historic Auto Station regulatory databases.

Historical records indicate that the site address of 58 East 5 th Street was used interchangeably with the address 56 East 5th Street. Wilson Bros. Garage was identified in the regulatory database as a historical automotive operation at the site for the years 1935 and 1941. Kv33 Corp was identified in the regulatory database report as a UST facility (Facility ID 0-009090). Based on information provided in the EDR report, there were four USTs at the site. Three of the USTs were removed from the site in 1986 and one was removed in 1987. As the USTs were removed prior to the implementation of current ADEQ regulatory protocol and no closure assessment soil sampling data was discovered, the former USTs constitute a REC at the site.

Portions of the site were identified as being located above the plume boundaries of the 7 <sup>th</sup> Street and Arizona Avenue Water Quality Assurance Revolving Fund (WQARF) study area, where groundwater is known to be contaminated with tetrachloroethene (PCE). The proposed redevelopment of the site includes the construction of residential apartment buildings; therefore, potential vapor encroachment from PCE-contaminated groundwater constitutes a REC at the site.

The Goodman VH facility 65 feet south (up-gradient) of the site was listed in the database report as an automotive service station from 1930-1945. Based on the close proximity and up-gradient position relative to the site, this former facility represents a REC to the site.

Based on distance, environmental setting and/or facility characteristics, the additional identified



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facilities and inquiry results from the local agencies do not constitute RECs in connection with the site at this time.

# Site Reconnaissance

Based on the site reconnaissance, two out of service sumps inside the wood and clay shops were identified. In addition, a circular 12 inch concrete patched area was observed on the floor inside the wood shop. This area may be a removed piston associated with a subsurface hydraulic lift or an area where a previous boring was advanced. Mr. Studwell, the owner of the site, had no knowledge of this feature. The two sumps and unknown circular concrete patched area represent RECs to the site.

#### Adjoining Properties

Immediately adjoining to the north is East 5<sup>th</sup> Street followed by single-family residences, and Primarily Japanese Auto Center at 600 North Stone Avenue; immediately adjoining to the east is North 7<sup>th</sup> Avenue followed by single-family residences, and AFR Collision and Refinishing Center at 520 North 7<sup>th</sup> Street; immediately adjoining to the south is a vacant structure at 509 North 7<sup>th</sup> Avenue and Alley Art Glass at 512 North Echols Avenue; and immediately adjoining to the west is a vacant lot, Arizona Trail Association at 534 North Stone Avenue, and North Stone Avenue followed by Enterprise Rent-A-Car at 549 North Stone Boulevard. Indications of RECs were not observed with the adjoining properties.

# Additional Services

An asbestos and lead-based paint survey was performed on the buildings at the site. The asbestos and lead-based paint survey report has been presented under a separate cover (Terracon Project No. 63157026, report dated February 27, 2015).

#### Conclusions

We have performed a Phase I ESA in accordance with the procedures included in ASTM Practice E 1527-13 of the site identified with Pima County parcel number 117-04-214A (56 and 58 East 5 <sup>th</sup> Street), parcel number 117-04-214B (529 North 7 <sup>th</sup> Avenue), parcel numbers 117-04-214C (519 North 7 <sup>th</sup> Avenue) and 117-04-2160 (546 North Stone Avenue), Tucson, Arizona, the site. This assessment has revealed evidence of the following RECs in connection with the site:

This site is within the 7<sup>th</sup> Street and Arizona Avenue groundwater plume. The groundwater beneath the site is estimated to be approximately 175 feet below ground surface (bgs) and is not used for drinking purposes, although there is a perched aquifer reported at a depth of approximately 60 feet bgs. The Tucson Water Company provides municipal water from other sources which meet federal and state drinking water standards to the site. The Responsible Parties have been identified and are cooperating in the cleanup relating to the plume. The proposed future use of the site will be multi-family residential apartment buildings; therefore, potential vapor intrusion from PCE-contaminated groundwater constitutes a REC at the site.



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- As a result of the historical review of the site and adjoining areas, Terracon identified historical USTs and automotive repair operations on the site, and former dry cleaning operations within the vicinity of the site that may have impacted soil or soil vapor at the site. These historic uses constitute a REC for the site.
- Two metal grate covered sumps were observed in the wood shop and in the clay shop during the site reconnaissance. The sumps' date of construction are unknown, but believed to have been installed in the 1940s during the original construction of the building. The sumps have been out of service for several years. Evidence of cracked concrete, staining and surface releases was observed inside and within the vicinity of the sumps at the time of the site reconnaissance. Based on the age of the sumps, prior automotive service activities, and observed conditions, the sumps represent a REC in connection with the site.
- A circular 12 inch concrete patched area was observed in the floor inside the wood shop area. This area may be a removed piston associated with a subsurface hydraulic lift or an area where a previous boring was advanced. Mr. Studwell, the owner of the site had no knowledge of this feature. This unknown circular concrete patched area represents a REC to the site.
- Gasoline USTs were historically located on the site. Records obtained from the City of Tucson Development Services Department indicate that in 1956 a 1,000-gallon gasoline UST was replaced with two 2,000-gallon gasoline USTs. The EDR database report indicated that three USTs were removed from the site in 1986 and one UST was removed in 1987. Complete records of the removal and subsequent closure assessment soil sampling for these USTs were not found. These USTs represent a REC to the site.

#### Recommendations

Based on the scope of services, limitations, and findings of this assessment, Terracon identified the following RECs for the site that warrant further investigation:

- The 7th Street and Arizona Avenue groundwater plume and historic uses of the site and adjoining areas may have impacted the soil or soil vapor at the site and should be assessed for potential vapor encroachment.
- Subsurface soil sampling should be conducted at the two sumps, unknown circular concrete patched area, and areas of historic USTs.
- Liquid wastes and used rags associated with the spray booth activities in the site's wood shop should be properly disposed at an appropriate off-site facility.

# PHASE I ENVIRONMENTAL SITE ASSESSMENT $5^{TH} - 7^{TH}$ CENTER 58 EAST 5TH STREET TUCSON, PIMA COUNTY, ARIZONA

Terracon Project No. 63157026 February 27, 2015

# 1.0 INTRODUCTION

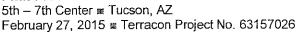
# 1.1 Site Description

Site Name	5th - 7th Center, LLC Property		
Site Location/Addresses	56 and 58 East 5th Street, 519 and 529 North 7 <sup>th</sup> Street, and 546 North Stone Avenue, Tucson, Pima County, Arizona		
Land Area Approximately 1.5 acres			
Site Improvements	The portion of the site identified with Pima County parcel number 117-04-214A (56 and 58 East 5 <sup>th</sup> Street) was develop with an approximate 3,400 square foot Quonset building on the northeast corner in 1946 and an approximate 6,690 square foot building on the northwest portion in 1946. The portion of the site identified with Pima County parcel number 117-04-214B (529 North 7 <sup>th</sup> Avenue) was develop with an approximate 1,750 building at the middle of the site in 1946. The portions of the site identified with Pima County parcel numbers 117-04-214C (519 North 7 <sup>th</sup> Avenue) and 117-04-2160 (546 North Stone Avenue) are currently vacant gravel covered lots. North Echols Avenue leads between parcels 117-04-214A (west portion) and 117-04-2160 (east portion).		

The site location is depicted on Exhibit 1 of Appendix A, which was reproduced from a portion of the USGS 7.5-minute series topographic map. A Site Diagram of the site and adjoining properties is included as Exhibit 2 of Appendix A. Acronyms and terms used in this report are described in Appendix B.

# 1.2 Scope of Services

This Phase I ESA was performed in accordance with Terracon Proposal No. P65150072, and was conducted consistent with the procedures included in ASTM E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this ESA was to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of this report. This purpose was undertaken through user-provided information, a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, user-provided information,





and a visual noninvasive reconnaissance of the site and adjoining properties. Limitations, ASTM deviations, and significant data gaps (if identified) are noted in the applicable sections of the report.

# 1.3 Standard of Care

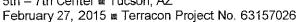
This ESA was performed in accordance with generally accepted practices of this profession, undertaken in similar studies at the same time and in the same geographical area. We have endeavored to meet this standard of care, but may be limited by conditions encountered during performance, a client-driven scope of work, or inability to review information not received by the report date. Where appropriate, these limitations are discussed in the text of the report, and an evaluation of their significance with respect to our findings has been conducted.

Phase I ESAs, such as the one performed at this site, are of limited scope, are noninvasive, and cannot eliminate the potential that hazardous, toxic, or petroleum substances are present or have been released at the site beyond what is identified by the limited scope of this ESA. In conducting the limited scope of services described herein, certain sources of information and public records were not reviewed. It should be recognized that environmental concerns may be documented in public records that were not reviewed. No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs. No warranties, express or implied, are intended or made. The limitations herein must be considered when the user of this report formulates opinions as to risks associated with the site or otherwise uses the report for any other purpose. These risks may be further evaluated — but not eliminated — through additional research or assessment. We will, upon request, advise you of additional research or assessment options that may be available and associated costs.

# 1.4 Additional Scope Limitations, ASTM Deviations and Significant Data Gaps

Based upon the agreed-on scope of services, this ESA did not include subsurface or other invasive assessments, vapor intrusion assessments or indoor air quality assessments (i.e. evaluation of the presence of vapors within a building structure), business environmental risk evaluations, or other services not particularly identified and discussed herein. Credentials of the company (Statement of Qualifications) have not been included in this report but are available upon request. Pertinent documents are referred to in the text of this report, and a separate reference section has not been included. Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested is not, or was not, received by the issuance date of the report. Information obtained for this ESA was received from several sources that we believe to be reliable; nonetheless, the authenticity or reliability of these sources cannot and is not warranted hereunder. This assessment was further limited by the following:







- Historic information identifying uses of the site were described as far back as 1909, when the site was developed with residential and commercial structures. Based on the available information, the lack of information regarding development of the site prior to 1909 does not appear to be a significant data gap.
- ADEQ records related to the site's former UST systems and possible associated releases were requested, but not provided prior to completion of this report. This lack of information regarding former USTs on the site is considered a significant data gap and represents a REC for the site.

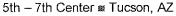
An evaluation of the significance of these limitations and missing information with respect to our findings has been conducted, and where appropriate, significant data gaps are identified and discussed in the text of the report. However, it should be recognized that an evaluation of significant data gaps is based on the information available at the time of report issuance, and an evaluation of information received after the report issuance date may result in an alteration of our conclusions, recommendations, or opinions. We have no obligation to provide information obtained or discovered by us after the issuance date of the report, or to perform any additional services, regardless of whether the information would affect any conclusions, recommendations, or opinions in the report. This disclaimer specifically applies to any information that has not been provided by the client.

This report represents our service to you as of the report date and constitutes our final document: its text may not be altered after final issuance. Findings in this report are based upon the site's current utilization, information derived from the most recent reconnaissance and from other activities described herein; such information is subject to change. Certain indicators of the presence of hazardous substances or petroleum products may have been latent, inaccessible, unobservable, or not present during the most recent reconnaissance and may subsequently become observable (such as after site renovation or development). Further, these services are not to be construed as legal interpretation or advice.

#### 1.5 Reliance

This ESA report is prepared for the exclusive use and reliance of Gardner Capital Development, LLC and Butler Housing Company, Inc. Use or reliance by any other party is prohibited without the written authorization of Gardner Capital Development, LLC and Terracon Consultants, Inc. (Terracon).

Reliance on the ESA by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the proposal, ESA report, and Terracon's Agreement. The limitation of liability defined in the Agreement is the aggregate limit of Terracon's liability to the client and all relying parties.



February 27, 2015 ■ Terracon Project No. 63157026



Continued viability of this report is subject to ASTM E 1527-13 Sections 4.6 and 4.8. If the ESA will be used by a different user (third party) than the user for whom the ESA was originally prepared, the third party must also satisfy the user's responsibilities in Section 6 of ASTM E 1527-13.

#### 1.6 Client Provided Information

Prior to the site visit the client representative, Mr. Reid Butler, was asked to provide the following user questionnaire information as described in ASTM E 1527-13 Section 6.

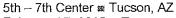
# **Client Questionnaire Responses**

Client Questionnaire Item	Client Did Not	Client's Response	
	Respond	Yes	No
Aware of any Environmental Cleanup Liens against the site.	X		
Actual Knowledge of Environmental Liens or Activity Use Limitations (AULs) that may encumber the site.	X		
Aware of any Specialized Knowledge or Experience related to the site or nearby properties.	X		
Actual Knowledge of a Significantly Lower Purchase Price because of hazardous substances or petroleum products.	X		
Commonly Known or Reasonably Ascertainable Information that is material to a release in connection with the site.	Х		
Obvious Indicators of Contamination at the site.	X		

The client did not provide the requested User's information as of the issuance date of the report, Terracon assumes the client is evaluating the questionnaire information outside the context of the Terracon's Phase I ESA scope of work and report.

# 2.0 PHYSICAL SETTING

Physic	Source	
Topograp	why (Refer to Appendix A for an excerpt of the	ne Topographic Map)
Site Elevation	Approximately 2,374 feet above msl	
Topographic Gradient/ Surface Runoff	Terrain is generally flat / To the southwest	Pima County MapGuide
Closest Surface Water	High School Wash, approximately 1,530	



February 27, 2015 ■ Terracon Project No. 63157026



Phys	Source		
	Soil Characteristics		
Soil Type	Yaqui fine sandy loam, 1 to 3 percent slopes		
Description	The Yaqui series consists of very deep, well drained soils formed in mixed alluvium. Yaqui soils are on alluvial fans and have slopes of 0 to 3 percent. The mean annual precipitation is about 11 inches and the mean annual air temperature is about 67 degrees F.	Web Soil Survey USDA – NRO Pima County, Eastern Part, A (AZ669), Version 7	
	Geology/Hydrogeology		
Formation	Quaternary Surficial deposits, undivided (0-2 Ma)		
Description	Unconsolidated to strongly consolidated alluvial and eolian deposits. This unit includes: coarse, poorly sorted alluvial fan and terrace deposits on middle and upper piedmonts and along large drainages; sand, silt and clay on alluvial plains and playas; and wind-blown sand deposits.	Geologic Map of Arizona Arizona Geological Survey Map #35 2000	
Estimated Depth to First Occurrence of Groundwater	Approximately 175 feet bgs	Plate 1 and 2, Water Table Elevation, from Annual Static Water Level Basic Data Report, Tucson Basin and Avra Valley, Pima County, Arizona, Tucson Water, 2000	
*Hydrogeologic Gradient	Toward the north		

<sup>\*</sup> The groundwater flow direction and the depth to shallow, unconfined groundwater, if present, would likely vary depending upon seasonal variations in rainfall and other hydrogeological features. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

# 3.0 HISTORICAL USE INFORMATION

Terracon reviewed the following historical sources to develop a history of the previous uses of the site and surrounding area, in order to help identify past uses for indications of RECs. Copies of selected historical documents are included in Appendix C.



5th - 7th Center 

™ Tucson, AZ

February 27, 2015 Terracon Project No. 63157026



# 3.1 Historical Topographic Maps

Readily available historical USGS topographic maps were reviewed to evaluate land development in connection with the site. The topographic map indicated in bold is included in Appendix A. The site is located within the boundaries of the *Tucson, Arizona* historical topographic maps (selected years reviewed: 1948, 1957, 1958, 1959, 1963, 1973, 1977, 1983, 1994, 1995, **1996** and 2002) are summarized below.

# **Historical Topographic Maps**

Direction	Description				
Site	The site is mapped as developed (1948). The site is mapped with several structures (1957). The site is mapped as developed (1958-2002).				
North	The area is mapped as developed with an improved roadway (1948). The area is mapped with several structures (1957). The area is mapped as developed (1958-2002).				
East	The area is mapped as developed with an improved roadway (1948). The area is mapped with several structures (1957). The area is mapped as developed (1958-2002).				
South	The area is mapped as developed (1948). The area is mapped with several structures (1957). The area is mapped as developed (1958-2002).				
West	The area is mapped as developed with an improved roadway (1948). The area is mapped with several structures (1957). The area is mapped as developed (1958-2002).				

# 3.2 Historical Aerial Photographs

Selected historical aerial photographs were reviewed at approximately 10 to 15 year intervals, if readily available, to obtain information concerning the history of development on and near the site. Evaluation of these aerials may be limited by a photo's quality and scale. Selected photographs are summarized on the next page.

- National Resources Conservation Science (NRCS), L255, 1936, No Scale
- Pima County MapGuide (PCMG), 118, 1941, No Scale
- © Cooper Aerial, 11-8, 1953, 1:800
- Cooper Aerial, 11-13, 1960, No Scale
- © Cooper Aerial, FL 8-39, 1967, No Scale
- Cooper Aerial, 9-16, 1973, No Scale
- Cooper Aerial, 24-35, 1979, 1:12,000
- Cooper Aerial, 24-35, 1988, 1:12,000
- © Cooper Aerial, 24-35, 1994, 1:12,000



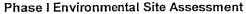
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- PCMG, No Photo ID, 2002, Variable Scale
- PCMG, No Photo ID, 2014, Variable Scale

# **Historical Aerial Photographs**

Direction	Description				
	West Portion: Appears to be developed; however, the aerial is of low quality and significant features may be obscured (1936). A large structure is present on the northwest corner. Several smaller structures are present on the remaining areas of the site. The resolution of the aerial is low and significant features may be obscured (1941). This part of the site appears occupied by commercial structures (1953). The east portion appears to be used for automotive storage/salvage (1960-1967). This portion of the site appears to have a structure on the northwest corner (1973-2002). This part of the site appears vacant (2014).				
Site	East Portion: Appears to be developed; however, the aerial is of low quality and significant features may be obscured (1936). Several structures are present. The existing structures are apparent. The resolution of the aerial is low and significant features may be obscured (1941). The north portion appears to be occupied by commercial structures while the south portion appears to be occupied by residential structures (1953-1960). The south portion appears to have been cleared of structures (1967). The south portion appears to be used for storage (1973). The south portion appears to be used for shipping trailer parking (1979). The south portion is vacant (1988-2014).				
North	The area appears to be developed with structures; however, the aerial is of low quality and significant features may be obscured. East 5 <sup>th</sup> Street traverses the area (1936). The area is occupied by a large, apparent commercial structure on the west and several apparent residential structures on the east (1941). The commercial lot on the east appears to be used for automotive storage/salvage (1953-1967). The large commercial structure has been removed (1973-1979). A new, apparent commercial structure is on the west portion (1988-2014).				
East	The area appears to be developed with structures; however, the aerial is of low quality and significant features may be obscured. North 7 <sup>th</sup> Avenue traverses the area (1936). Several structures are depicted in the area (1941). The north end is occupied by apparent residential structures while the remaining area is occupied by commercial structures (1953). An apparent commercial property, just south of the residence, appears to be used for automotive storage/salvage (1960-1973). Automotive storage/salvage operations appear to no longer exist in the area (1979-2014).				





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Direction	Description				
South	The area appears to be developed with structures; however, the aerial is of low quality and significant features may be obscured. North Echols Avenue traverses the area north to south (1936). Several residential structures are on the east portion while several commercial structures are on the west portion (1941). One structure is on the majority of the west portion while several smaller, apparent commercial structures are on the remaining area (1953). A large addition is present on the structure on the southwest corner (1960). Several structures have been removed from the southeast corner (1967-1994). The majority of the structure on the west portion has been removed (2002). Approximately half of the structure on the southwest corner has been removed (2014).				
West	The area appears to be developed with structures; however, the aerial is of low quality and significant features may be obscured. North Stone Avenue traverses the area north to south (1936). Several structures are depicted on the area (1941-1953). Two structures on the south portion have been removed (1960). A structure on the north portion has been altered and appears to be a service station (1967). A property on the south portion appears to be used for automotive sales (1973). The former apparent automotive sales lot is now vacant (1979-2002). The majority of the southern portion of the area is a vacant, gravel-covered lot (2014).				

# 3.3 Historical City Directories

The Tucson Western Directory Co., Arizona Directory Co., Baldwin, Mullin-Kille, and Cole city directories used in this study were made available through the Pima County Juan Valdez Public Library (selected years reviewed: 1920, 1925, 1929, 1933, 1937, 1940, 1944, 1953, 1959, 1964, 1971, 1978, 1985, 1993, 2001, 2007, 2014). Terracon attempted to review city directories for the years 1910, 1914, and 1917; however, these directories did not organize listings by address ranges. Since these references are copyright protected, reproductions are not provided in this report. Street addresses identified for the site are as follows:

- 56 East 5<sup>th</sup> Street
- 519 North 7<sup>th</sup> Avenue
- 529 North 7<sup>th</sup> Avenue

# **Historical City Directories**

Direction	Description				
Site	<b>56 E. 5<sup>th</sup> Street:</b> No listings (1920-1933), Bisbee Douglas Truck Co. (1937), No Listings (1940-1964), Ryder Truck Rental (1971), Tucson Fleet Service / Whitfeild Transportation (1971-1985), Arizona Theatre Service / Clipper Express / Film Transport Co / (1978), Arizona Express (1985), Kv33 (1956), No Listings (1993-2014)				





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Direction	Description			
	<b>58 E. 5<sup>th</sup> Street:</b> No listings (1920-1944), Arizona Express (1953-1959), No Listings (1953-1993), Acres Advertising / Baker Scott / Tucson Arts District (2001), 5 <sup>th</sup> – 7 <sup>th</sup> Center LLC (2007-2014), Harris Environmental Group Inc. (2007), Wet Media (2014)			
	<b>519 N. 7<sup>th</sup> Avenue:</b> No listings (1920-1944 and 1959-2014), Mac Tracey's Welding Shop (1953)			
	529 N. 7 <sup>th</sup> Avenue: Residential Listings (1920-1953), No Listings (1959-2014)			
	546 N. Stone Avenue: Gee Sing Grocery (1920), Sing Lee Grocery (1925-1937), Page missing from directory (1940), Subway Market (1944-1953), No Listing (1959), Tally Ho Tavern (1971-1978), Post Litho Printing (1978-1985), No Listings (1993), Auracle (2001), No Listings (2007-2014)			
	<b>25-99 (odd) East 5<sup>th</sup> Street</b> : Residential Listings (1920-2001), No Listings (2007-2014)			
	<b>602 and 605-617 (odd) N. 7<sup>th</sup> Avenue:</b> Residential Listings (1920-2014)			
North	<b>600 N. Stone Avenue*:</b> No Listings (1920-1937, 1944-1978, and 2007), Multiple Automotive Maintenance Listings (1985-2001 and 2014)			
	<b>601 N. Stone Avenue*:</b> No Listings (1920-1937, Multiple Automotive Maintenance / Parts Sales / Tire Sales Listings (1953-2014)			
	104-108 (even) E. 5 <sup>th</sup> Street: Residential Listings (1920-2014)			
East	<b>510-540 (even) N. 7<sup>th</sup> Avenue:</b> Residential Listings (1920-2001), Commercial Listings delineated below by address and year(s)			
	510 N. 7 <sup>th</sup> Avenue: Tucson Warehouse and Transportation Co (1959)			
	528 N. 7 <sup>th</sup> Avenue: O'Reilly Motor Company (1953)			
	<b>530 N.</b> 7 <sup>th</sup> Avenue: O'Reilly Motor Company (1959), National Paint (1971-1978), Multiple Automotive Maintenance / Fleet Service / Rental Listings (1985-2014)			





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Direction	Description				
	<b>509 N. 7<sup>th</sup> Avenue:</b> No Listings (1920-1929 and 1964-2014), Residential Listings (1933-1959)				
	<b>512 N. Echols Avenue:</b> Out of Range (1920-1944), No Listings (1953-2014)				
	<b>510-538 (even) N. Stone Avenue*:</b> Residential Listings (1920-1933, 1959-1971, and 1985-1993), Commercial Listings delineated below by address and year(s)				
	<b>510 N. Stone Avenue*:</b> Multiple Automotive Maintenance Listings / Sales / Parts Listings (1944-1953), Commercial Listing (1959), Construction Listings (2007)				
	520 N. Stone Avenue*: Multiple Automotive Maintenance Listings (1929-1937)				
South	522 N. Stone Avenue*: Automotive Maintenance Listing (1937)				
South	<b>524 N. Stone Avenue*:</b> Multiple Service Station / Automotive Maintenance / Auto Parts / Tire Sales Listings (1933-1937)				
	<b>530 N. Stone Avenue*:</b> Multiple Service Station / Automotive Maintenance / Auto Parts Listings (1920-1937, 1944-1953, and 1964-1993), The Mat Bevel Institute (2007)				
	532 N. Stone Avenue*: Advance Janitorial Supply (1964)				
	534 N. Stone Avenue*: Via West Interface (1985-1993)				
	536 N. Stone Avenue*: Eddie and Hunter's Shop (2001)				
	538 N. Stone Avenue*: Nuey Grocery (1925-1933), Arizona Carbn Fl Co (1985), Allyn Haynes Catering (2001-2014)				
	<b>516 N. Ash Avenue:</b> No Listings (1920-1944 and 1964-2014), Pacific Mtr Trucking Co. (1953-1959)				
West	549 N. Stone Avenue*: No Listings (1920, 1959), Multiple Service Stations (1925-1949), Hack/Baldwin Richfield Services, Residential Listing (1964), Multiple Automotive Maintenance Listings (1971-1993), Enterprise Rent-a-Car (2001-2014)				

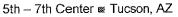
<sup>\*</sup>Pages for Stone Avenue missing in the 1940 City Directory

Several auto repair and transportation facilities were listed on the portion of the site addressed as 56 and 58 East 5<sup>th</sup> Street since the early 1930s. Due to the long term use as auto repair and transportation facilities there is a potential for hazardous/regulated substances to have impacted the site. These historic uses represent a REC to the site.

# 3.4 Historical Fire Insurance Maps

Historical fire insurance maps produced by the Sanborn Map Company were requested from EDR to evaluate past uses and relevant characteristics of the site and surrounding properties. EDR provided the 1901, 1909, 1919, 1947, 1949, and 1968 Sanborn Map as summarized below.





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# **Historical Fire Insurance Maps**

Direction	Description
Site	West Portion: Site not depicted on map (1901). The west portion of the site is occupied by a grocer, a dwelling, and several smaller structures (1909). The site is occupied by several dwellings (1919). A large structure occupies the northwest corner of the site. Four smaller structures are spread among the remaining site (1947-1949). The site is occupied by one single structure, labeled "Rest", located on the northwest corner (1968). East Portion: Site not depicted on map (1901). Eight dwellings are spread among the area (1909). Ten dwellings are spread among the area. A structure, labeled "Auto", lies near the middle of the site (1919). An auto repair shop and two auto freight depots occupy the north portion of the site. The south portion of the site is occupied by several dwellings (1947-1949). The site is occupied by a structure, labeled "Auto Rep", located on the northeast corner and a large structure, labeled "Auto Freight Depot" in three
	locations, on the majority of the west portion of the site (1968).
North	A horse car stable and a foundation for an adobe building occupy the southwest portion of the area (1901). A street car shed occupies a large portion of the west portion of the area (1909). The western portion of the area is occupied by Tucson Rapid Transit Car Barn, which includes an eight-car-capacity car barn, a repair shop, and a storage structure. The east portion of the area is occupied primarily by dwellings with a structure, labeled "Auto", lying in the middle of the portion (1919). The west portion of the area is occupied by Tucson Rapid Transit Co's Auto Bus Terminal. The east portion of the area is occupied by several dwellings (1947). The west portion is occupied by a large structure; however, the label is unreadable. The east portion is occupied by several dwellings (1949). A large structure, labeled "Priv Garage", occupies the majority of the west portion of the area. Several dwellings occupy the east portion of the area (1968).
East	Area not depicted on map (1901). The area is occupied by several dwellings (1909-1919). The area is occupied by several dwellings and a private garage (1947). The area is occupied by several dwellings mixed among commercial lots and structures (1949-1968).
South	Area not depicted on map (1901). The west portion of the area is occupied by several dwellings (1909). The area is occupied by several dwellings which are followed by a planing mill (1919). From east to west, the area is occupied by dwellings, several commercial structures, and a large automotive-related structure with three other commercial structures (1947-1949). The dwellings on the east portion of the area have been replaced by a structure, labeled "Gas & Oil" (1968).
West	Area not depicted on map (1901). The area is occupied by several dwellings (1909-1919). A structure, labeled "Gas & Oil", and several other automotive-related structures, occupies the area (1947-1949). The area is occupied by a filling station (1968).

Historic auto repair facilities depicted on the site are considered a REC for the site. Copies of the Sanborn maps are included in Appendix C.

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# 3.5 Site Ownership

Based on a review of information obtained from Pima County assessor's records, the current site owner of parcel numbers 117-04-214A, -214B, -214C, and -2160 is  $5^{th} - 7^{th}$  Center, LLC.

#### 3.6 Title Search

At the direction of the client, a title search was not included as part of the scope of services. Unless notified otherwise, we assume that the client is evaluating this information outside the scope of this report.

#### 3.7 Environmental Liens

Environmental lien records recorded against the site were not provided by the client. At the direction of the client, performance of a review of these records was not included as part of the scope of services and unless notified otherwise, we assume that the client is evaluating this information outside the scope of this report.

# 3.8 Interviews Regarding Current and Historical Uses

The following individual was interviewed regarding the current and historical use of the site.

#### Interviewee

Interviewer	Interviewee/Phone #		Title	Date/Time
Kevin T. Woner	Richard 0318	Studwell/520-743-	Site Owner	February 24, 2015/11:00

Mr. Studwell reported that he has been familiar with the site for ten years and to the best of his knowledge there have been no USTs, AST, or hazardous/regulated substances stored or used on the site during that time. The Quonset building on the northeast portion of the site has been used as a wood shop and artistic clay studio. The building on the northwestern portion of the site has been used as offices and an art studio for several local artists. Mr. Studwell had no knowledge of the 12 inch concrete patched area inside the wood shop. Mr. Studwell was not aware of any pending, threatened or past environmental litigation, proceedings or notices of possible violations of environmental laws or liability or potential environmental concerns in connection with the site.

#### 3.9 Building Department Records

Terracon reviewed building department records from the City of Tucson Department of Developmental Services for information indicating RECs on the site. Developmental Services records had occupancy, inspection, and building records for the site dating back to the early 1950s. A building permit dated August 1956 for the replacement of one 1,000-gallon gasoline tank with two 2,000-gallon gasoline tanks was found for the portion of the site addressed as 58



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East 5<sup>th</sup> Street. Documentation for the removal and subsequent closure assessment soil sampling of these USTs was not found. No additional records of environmental significance were found.

A copy of this document is included in Appendix C.

# 3.10 Historical Use Information Summary

Based on a review of the historical information, the site was developed with residential structures as far back as the early 1900s. By the early 1930s retail businesses including a grocery store, auto repair shops and transportation facilities were on the site. The existing structures on the northeast and northwest portions of the site were constructed in 1946 and were used as auto repair, auto freight and warehouse facilities through the mid-1980s. Structures on the southernmost portion of the site were removed in the late 1960s and the structures on the westernmost portion of the site were removed in early-2000. The historic uses as auto repair and transportation facilities represent a REC to the site.

In addition, gasoline USTs were historically on the site. Records obtained from the City of Tucson Development Services Department indicate that in 1956 a 1,000-gallon gasoline UST was replaced with two 2,000-gallon gasoline USTs. The EDR database report indicated that three USTs were removed from the site in 1986 and one UST was removed in 1987. Complete records of the removal and subsequent closure assessment soil sampling for these USTs were not found. These former USTs represent a REC to the site.

#### 4.0 RECORDS REVIEW

Regulatory database information was provided by EDR, a contract information services company. The purpose of the records review was to identify RECs in connection with the site. Information in this section is subject to the accuracy of the data provided by the information services company and the date at which the information is updated, and the scope herein did not include confirmation of facilities listed as "unmappable" by regulatory databases.

In some of the following subsections, the words up-gradient, cross-gradient and down-gradient refer to the topographic gradient in relation to the site. As stated previously, the groundwater flow direction and the depth to shallow groundwater, if present, would likely vary depending upon seasonal variations in rainfall and the depth to the soil/bedrock interface. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

#### 4.1 Federal and State/Tribal Databases

Listed below are the facility listings identified on federal and state/tribal databases within the ASTM-required search distances from the approximate site boundaries. Database definition, descriptions, and the database search report are included in Appendix D.



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# **Federal Databases**

Database	Description	Radius (miles)	Listings
CERCLIS	The CERCLIS database is a compilation of facilities which the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to the CERCLA of 1980.	0.5	1
CERCLIS / NFRAP	CERCLIS/NFRAP refers to facilities that have been removed and archived from EPA's inventory of CERCLA sites.	0.5	2
ERNS	The Emergency Response Notification System (ERNS) is a listing compiled by the EPA on reported releases of petroleum and hazardous substances to the air, soil and/or water.	Site	0
IC / EC	A listing of sites with institutional and/or engineering controls in place. IC include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls. EC include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.	Site	0
NPL	The NPL is the EPA's database of uncontrolled or abandoned hazardous waste facilities that have been listed for priority remedial actions under the Superfund Program.	1	0
NPL (Delisted)	The NPL (Delisted) refers to facilities that have been removed from the NPL.	0.5	0
RCRA CORRACTS/ TSD	The EPA maintains a database of RCRA facilities associated with treatment, storage, and disposal (TSD) of hazardous waste that are undergoing "corrective action." A "corrective action" order is issued when there has been a release of hazardous waste or constituents into the environment from a RCRA facility.	1	0
RCRA Generators	The RCRA Generators database, maintained by the EPA, lists facilities that generate hazardous waste as part of their normal business practices. Generators are listed as either large (LQG), small (SQG), or conditionally exempt (CESQG). LQG produce at least 1000 kg/month of non-acutely hazardous waste or 1 kg/month of acutely hazardous waste. SQG produce 100-1000 kg/month of non-acutely hazardous waste. CESQG are those that generate less than 100 kg/month of non-acutely hazardous waste.	Site and adjoining properties	1
RCRA Non- CORRACTS/ TSD	The RCRA Non-CORRACTS/TSD Database is a compilation by the EPA of facilities which report storage, transportation, treatment, or disposal of hazardous waste. Unlike the RCRA CORRACTS/TSD database, the RCRA Non-CORRACTS/TSD database does not include RCRA facilities where corrective action is required.	0.5	0



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# State/Tribal Databases

Database	Description	Radius (miles)	Listings
AUL	Activity and use limitations include both engineering controls and institutional controls. DEUR: Declaration of Environmental Use Restriction. A restrictive land use covenant that is required when a property owner elects to use an institutional (i.e., administrative) control or engineering (i.e., physical) control as a means to meet remediation goals. The DEUR runs with and burdens the land, and requires maintenance of any institutional or engineering controls	Site	0
Brownfields	State and/or Tribal listing of Brownfield properties addressed by Cooperative Agreement Recipients or Targeted Brownfields Assessments.	0.5	16
LUST	State and/or Tribal database of leaking underground storage tanks in the state of Arizona.	0.5	16
SHWS	The ADEQ Zip Acids List (state equivalent to CERCLIS) contains locations subject to investigations concerning possible contamination of soil, surface water, or groundwater. Inclusion of any facility or site on this list does not mean that the location is contaminated, is causing contamination, or is in violation of State or Federal statutes or regulations. The list has been archived and will no longer be distributed or updated.	0.5	16
SPILLS	The ADEQ maintains a logbook of chemical spills and incidents referred to the Emergency Response Unit.	Site	0
SPL	The Arizona Department of Environmental Quality (ADEQ) maintains a database representative of the sites and potential sites within the jurisdiction of the Superfund Program Section. It is comprised of the following elements: 1) Water Quality Assurance Revolving Fund Registry Sites; 2) Potential WQARF Registry sites; 3) NPL sites; and 4) Department of Defense sites requiring SPS oversight. State equivalent to CERCLIS.	1	2
SWF/LF	State and/or Tribal database of solid waste facilities located within Arizona. The database information may include the facility name, class, operation type, area, estimated operational life, and owner.	0.5	0
UST	State and/or Tribal database of registered storage tanks in the State of Arizona which may include the owner and location of the tanks.	Site and adjoining properties	18
VCP	State and/or Tribal facilities included as Voluntary Cleanup Program sites.	0.5	2
WQARF	The ADEQ maintains a database of sites that may have an actual or potential impact upon the waters of the State, caused by hazardous substances. The Water Quality Assurance Revolving Funds (WQARF) program provides matching funds to political subdivisions and other State agencies for clean-up activities. State equivalent to NPL.	1	2





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In addition to the above ASTM-required listings, Terracon reviewed other federal, state, local, and proprietary databases provided by the database firm. A list of the additional reviewed databases is included in the regulatory database report included in Appendix D.

The following table summarizes the site-specific information provided by the database and/or gathered by this office for facilities identified within a 500-foot radius of the site. Facilities are listed in order of proximity to the site. Additional discussion for up-gradient facilities located within a 200-foot radius of the site follows the summary table.

# **Listed Facilities**

Facility Name And Location	Estimated	Database Listings
	Distance/Direction/Gradient	· • .
7 <sup>th</sup> Street & Arizona Avenue	Regional area including the Site	AZ WQARF, SPL
Wilson Bros Garage 58 E. 5 <sup>th</sup> Street	Site	EDR US Hist Auto Stat
Kv 33 Corp 56 E. 5 <sup>th</sup> Street	Site	UST
Milex Auto Service Centers Milex Five Star Auto & Truck Serv 600 N. Stone Avenue	65 feet / N / down-gradient	EDR US Hist Auto Stat, UST, FINDS, RCRA NonGen / NLR
Arizona Auto Refrigeration Heap & Manly Tires Dewey S Tune Up Serv 549 N. Stone Avenue	65 feet / W / cross-gradient	EDR US Hist Auto Stat, UST
Goodman V H 524 N. Stone Avenue	65 feet / S / up-gradient	EDR US Hist Auto Stat
530 N. 7 <sup>th</sup> Avenue	70 feet / E / cross-gradient	EDR US Hist Auto Stat
Payne S L C Chevron Sta Wakefield Investments 107 E. 6 <sup>th</sup> Street	100 feet / SE / up-gradient	EDR US Hist Auto Stat, LUST, UST
Diaz S Garage 527 N. Stone Avenue	140 feet / SW / cross-gradient	EDR US Hist Auto Stat
White S Pete Garage Rear 616 N. Stone Avenue	145 feet / N / down-gradient	EDR US Hist Auto Stat
516 N. Ash Avenue 117-04-209	150 feet / WSW / cross-gradient	UST
Vaught A T 520 N. Stone Avenue	160 feet / S / up-gradient	EDR US Hist Auto Stat
Motor Menders Purcell Tire Co 601 N. Stone Avenue	180 feet / NW / down-gradient	EDR US Hist Auto Stat, UST
Schutmann Serv St 607 N. Stone Avenue	200 feet / NW / down-gradient	EDR US Hist Auto Stat



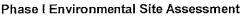
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Facility Name And Location	Estimated	Database Listings
	Distance/Direction/Gradient	
Youngblood J N Holloway S Garage 11 E. 6 <sup>th</sup> Street	200 feet / SW / cross-gradient	EDR US Hist Auto Stat
Conns Pioneer Service Curry Garage 20 W. 5 <sup>th</sup> Street	210 feet / WNW / cross-gradient	EDR US Hist Auto Stat
Tucson Steam Laundry 25-41 E. 6 <sup>th</sup> Street 25/27 E. 6 <sup>th</sup> Street 41 E. 6 <sup>th</sup> Street	210 feet / S / up-gradient	EDR US Hist Auto Stat, EDR US Hist Cleaners, FINDS, US BROWNFIELDS
Tucson Laundry and Drycleaners Vacant Property 48 E. 6 <sup>th</sup> Street	210 feet / S / up-gradient	EDR US Hist Cleaners, UST, DRYCLEANERS
Brousse Frank 15 E. 6 <sup>th</sup> Street	210 feet / S / cross-gradient	EDR US Hist Auto Stat
Shell Oil Co 502 N. Stone Avenue	255 feet / SW / cross-gradient	EDR US Hist Auto Stat
Schumann Serv Sta Tanno's Auto Detailing 503 N. Stone Avenue	295 feet / SW / cross-gradient	EDR US Hist Auto Stat, UST
Maxwell S Wheel Alignment 131 E. 6 <sup>th</sup> Street	300 feet / ESE / up-gradient	EDR US Hist Auto Stat
Brake Serv Co 34 W. 6 <sup>th</sup> Street	300 feet / WSW / cross-gradient	EDR US Hist Auto Stat
Bonded Coin Washer Service 632 N. 7 <sup>th</sup> Avenue	310 feet / NNE / down-gradient	EDR US Hist Cleaners
610 N. 9 <sup>th</sup> Avenue	325 feet / WNW / down-gradient	EDR US Hist Auto Stat
Veith S Signal Serv Arizona Truckoutfitters 649 N. Stone Avenue	350 feet / NW / down-gradient	EDR US Hist Auto Stat, UST
Davis Andy 638 N. 7 <sup>th</sup> Avenue	360 feet / NNE / cross-gradient	EDR US Hist Auto Stat
Bryan Fred 547 N. 6 <sup>th</sup> Avenue	375 feet / E / cross-gradient	EDR US Hist Auto Stat
Snow Cleaning Works 523 N. 6 <sup>th</sup> Avenue	375 feet / E / cross-gradient	EDR US Hist Cleaners, DRYCLEANERS
Star Cycle 549 N. 6 <sup>th</sup> Avenue	375 feet / E / cross-gradient	EDR US Hist Auto Stat
Zenith Cleaners 543 N. 6 <sup>th</sup> Avenue	375 feet / E / cross-gradient	DRYCLEANERS
Barker S Garage 135 E. 6 <sup>th</sup> Street	390 feet / SE / up-gradient	EDR US Hist Auto Stat





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Facility Name And Location	Estimated	Database Listings
	Distance/Direction/Gradient	
Miller Auto Co	390 feet / SE / up-gradient	EDR US Hist Auto Stat
137 E. 6 <sup>th</sup> Street		
Sixth & 6Th Auto Serv	390 feet / ESE / up-gradient	EDR US Hist Auto Stat
507 N. 6 <sup>th</sup> Avenue		
Vincent S Garage	390 feet / ESE / up-gradient	EDR US Hist Auto Stat
509 N. 6 <sup>th</sup> Avenue		
Downtown Garage	390 feet / ESE / up-gradient	EDR US Hist Auto Stat,
Rainbow Auto Painting		FINDS, RCRA NonGen /
501 N. 6 <sup>th</sup> Avenue		NLR
Fox Bill Automotive Diagnosis	405 feet / N / down-gradient	EDR US Hist Auto Stat
24 E. 4 <sup>th</sup> Street		
Fox Bill Automotive Diagnosis &	405 feet / N / cross-gradient	EDR US Hist Auto Stat
Elec		
32 E. 4 <sup>th</sup> Street		
Old Pueblo Shell Serv	410 feet / N / cross-gradient	EDR US Hist Auto Stat
Old Pueblo Union Service		
648 N. Stone Avenue		
Tourist Garage	425 feet / W / cross-gradient	EDR US Hist Auto Stat
43 W. 5 <sup>th</sup> Street		
Cleanwell Cleaners & Dyer	425 feet / W / cross-gradient	DRYCLEANERS
540 E. 9 <sup>th</sup> Avenue		

ordere in the property of the order of the section in

# 7th Street & Arizona Avenue WQARF Site

The site is located within the 7<sup>th</sup> Street and Arizona Avenue WQARF study area, which includes a plume of groundwater known to be contaminated with tetrachloroethene (PCE). According to the 7<sup>th</sup> Street and Arizona Avenue / Oliver's Cleaners Fact Sheet, the soil beneath the site consists of predominantly of fine-grained sands and silts interbedded with fine grained sediments from ground surface to approximately 80 feet below ground surface (bgs). The interbedded material is underlain by a clay aquitard approximately 12 feet in thickness, forming a perched aquifer. Depth to perched water is approximately 60 to 65 feet bgs. The regional aquifer is encountered at approximately 170 feet bgs. The proposed future use of the site will be multi-family residential apartment buildings; therefore, potential vapor intrusion from PCE-contaminated groundwater constitutes a REC at the site. A copy of the 7<sup>th</sup> Street and Arizona Avenue / Oliver's Cleaners Fact Sheet is provided at the end of Appendix D.

# Wilson Bros. Garage (58 East 5<sup>th</sup> Street) and Kv33 Corp (56 East 5<sup>th</sup> Street)

Historical records indicate that the site address of 58 East 5 <sup>th</sup> Street (assigned to APN 117-04-214A) was used interchangeably with the address 56 East 5 <sup>th</sup> Street. Wilson Bros. Garage was identified in the regulatory database as a historical automotive operation at the site for the years 1935 and 1941. Kv33 Corp was identified in the regulatory database report as a UST facility (Facility ID 0-009090). Based on information provided in the EDR report there were four USTs at the site. Three of the USTs were removed from the site in 1986 and one was removed in 1987.



5th – 7th Center **™** Tucson, AZ February 27, 2015 **™** Terracon Project No. 63157026

As the USTs were removed prior to the implementation of current ADEQ regulatory protocol and no documentation of closure assessment soil sampling was discovered, the former USTs constitute a REC at the site.

# Goodman V H (524 North Stone Avenue)

This former facility, located 65 feet south and hydrogeologically up-gradient from the site, was identified in the regulatory database report as a service station from 1930-1945. Based on the close proximity and up-gradient position relative to the site, this former facility represents a REC to the site.

#### 530 N. 7<sup>th</sup> Avenue (530 North 7<sup>th</sup> Avenue)

This facility, located 70 feet east and hydrogeologically cross-gradient from the site, was identified in the regulatory database report as a historical automotive operation (AFR Collision and Refinish) in the year 2012. Based on the regulatory status, apparent topographic gradient, hydrogeological gradient, and depth to groundwater, this facility does not appear to represent a REC to the site at this time.

# Payne S L C Chevron Sta and Wakefield Investments (107 E. 6th Street)

This property (107 E. 6<sup>th</sup> Street), located 100 feet southeast and hydrogeologically up-gradient of the site was identified in the current regulatory database under Payne S L C Chevron Sta and Wakefield Investments. Payne S L C Chevron was identified as an automobile/gasoline service station from 1955-1965. Wakefield Investments was identified as a UST facility (Facility ID 0-007815) and LUST site (LUST ID 560.01). Based on information provided in the EDR report, there was one UST at the property that was removed in 1988. The EDR report further indicates that the LUST case was closed in 1989 with closed soil levels meeting Tier 1 risk based corrective action standards. Based on the regulatory status and depth to groundwater, this former facility does not appear to represent a REC to the site at this time.

# Vaught AT (520 North Stone Avenue)

This former facility, located 160 feet south and hydrogeologically up-gradient from the site, was identified in the regulatory database report as a historical automotive repair facility in the year 1935. Based on the distance and depth to groundwater, this former facility does not appear to represent a REC to the site at this time.

The remaining facilities listed in the database report do not appear to represent RECs to the site at this time based upon regulatory status, apparent topographic gradient, apparent hydrogeologic gradient, and/or distance from the site.

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the site. The report listed twenty-two (22) facilities in the unmapped section. Determining the location of unmapped facilities is beyond the scope of this assessment; however, none of these facilities were identified as the site or adjacent properties. These facilities are listed in the database report in Appendix D.

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Phase I Environmental Site Assessment

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# 4.2 Arizona Department of Environmental Quality

The ADEQ web site was searched for USTs listed for the site. Four listings for USTs were identified for the site (Kv 33 Corp, Facility #0-009090) Three USTs were listed as closed by permanent removal in 1986, and one UST was shown as closed by permanent removal in 1987. No LUSTs were listed associated with this facility. The ADEQ was contacted on February 24, 2015 to perform a records search regarding environmental records or information indicating environmental concerns including possible LUSTs incidents and USTs registered for the site. Terracon has not received a reply from the ADEQ at the time of the issuance of this report. Should information of environmental significance be found, an addendum will be issued to this report.

# 4.3 Local Agency Inquiries

# 4.3.1 Pima County Tax Assessor

Records from the Pima County Tax Assessor office indicated that the current structures on the site were developed in 1946. The records indicated that parcel number 117-04-214A was connected to the sanitary sewer system in 1937 and 2007.

A copy of the sewer connection record is included in Appendix C.

# 4.3.2 Fire Department

The City of Tucson Fire Department was contacted by email regarding environmental records or information indicating environmental concerns for the site. Ms. Annette Lopez, Administrator with the City of Tucson Fire Department reported that there were no records of USTs or hazardous materials responses on file for the site.

# 4.3.3 Planning, Building Permit Records

Terracon reviewed building department records from the Pima County Department of Developmental Services for information indicating RECs on the site. Developmental Services records had occupancy, inspection, and building permit records for the site dating back to the early 1950s. A building permit dated August 1956 for the replacement of one 1,000-gallon gasoline tank with two 2,000-gallon gasoline tanks was found for the portion of the site addressed as 58 East 5<sup>th</sup> Street. Documentation for the removal of these UST was not found. No additional records of environmental significance were found.

# 4.4 Records Review Summary

Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed. The site was identified in the UST and Historic Auto Station regulatory databases.





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Historical records indicate that the site address of 58 East 5 th Street (assigned to APN 117-04-214A) was used interchangeably with the address 56 East 5 th Street. Wilson Bros. Garage was identified in the regulatory database as a historical automotive operation at the site for the years 1935 and 1941. Kv33 Corp was identified in the regulatory database report as a UST facility (Facility ID 0-009090). Based on information provided in the EDR report, there were four USTs at the site. Three of the USTs were removed from the site in 1986 and one was removed in 1987. As the USTs were removed prior to the implementation of current ADEQ regulatory protocol and no closure assessment soil sampling data was discovered, the former USTs on the site constitute a REC at the site.

Portions of the site were identified as being located within the plume boundaries of the 7 <sup>th</sup> Street and Arizona Avenue WQARF study area, where groundwater is known to be contaminated with PCE. The proposed redevelopment of the site includes the construction of residential apartment buildings; therefore, potential vapor encroachment from PCE-contaminated groundwater constitutes a REC at the site.

The Goodman VH facility 65 feet south (up-gradient) of the site was listed in the database report as an automotive service station from 1930-1945. Based on the close proximity and up-gradient position relative to the site, this former facility represents a REC to the site.

Based on distance, environmental setting and/or facility characteristics, the additional identified facilities and inquiry results from the local agencies do not constitute RECs in connection with the site at this time.

# 5.0 SITE RECONNAISSANCE

#### 5.1 General Site Information

Information contained in this section is based on a visual reconnaissance conducted while walking through the site and the accessible interior areas of structures, if any, located on the site. Exhibit 2 in Appendix A is a Site Diagram of the site. Photo documentation of the site at the time of the visual reconnaissance is provided in Appendix E. Credentials of the individuals planning and conducting the site visit are included in Appendix F.









- Pawiripiki katawa 🧗 🚺

#### **General Site Information**

Site Reconnaissance		•		
Field Personnel	Kevin T. Woner			
Reconnaissance Date	February 24, 2015			
Weather Conditions	51°F / Overcast with lig	ht rain		
Site Contact/Title	Richard Studwell/Owner			
Building Description				
Building Identification	Building Use	Approx. Construction Date	Number of Stories	Approx Size (ft²
Art Studios / Offices	Several art studios and professional offices	1946	One	8,500
Quonset Building	Wood shop and artistic clay shop 1946 One 3,		3,400	
Site Utilities				
Drinking Water	Tucson Water Company			
Wastewater	Pima County			

# 5.2 Overview of Current Site Occupants and Operations

The building on the northwest portion of the site is used by Wet-Media, Inc., a provider of world-wide social networking sites. In addition, the building is used by several local artists as studio and display space. The types of art produced at the site include paintings, weaving, ceramics and digital photography. The building on the northeast portion of the site is used as a wooden furniture manufacturing shop and as an artistic clay figure studio and manufacturing shop with electric and natural gas fired kilns. The wooden furniture manufacturing shop has a spray booth for the application of wood finishes including stain and lacquer. Small quantities of the lacquer and stain are purchased on an as needed basis and no large quantities are stored on the site. Liquid wastes generated from the finishing process and cleaning of the spray guns either volatilize or are cleaned-up using rags.

#### 5.3 Site Observations

The following table summarizes site observations and interviews. Affirmative responses (designated by an "X") are discussed in more detail following the table.





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February 27, 2015 

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# **Site Characteristics**

Category Item or Feature		Observed or Otherwise Identified
	Emergency generators	
	Elevators	
	Air compressors	X
	Hydraulic lifts	
Site Operations,	Dry cleaning	
Processes, and Equipment	Photo processing	-
	Ventilation hoods and/or incinerators	Х
	Waste treatment systems and/or water treatment systems	
	Heating and/or cooling systems	X
	Other processes or equipment	
Aboveground	Aboveground storage tanks	
Chemical or Waste	Drums, barrels and/or containers ≥ 5 gallons	
Storage	MSDS	
	Underground storage tanks or ancillary UST equipment	
	Sumps, cisterns, catch basins and/or dry wells	
Underground Chemical or Waste	Grease traps	
Storage, Drainage or Collection	Septic tanks and/or leach fields	
Systems	Oil/water separators	X
	Pipeline markers	
	Interior floor drains	
Electrical	Transformers and/or capacitors	x
Transformers/ PCBs	Other equipment	





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Tucson, AZ

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Category	Item or Feature	Observed or Otherwise Identified
	Stressed vegetation	
	Stained soil	
	Stained pavement or similar surface	
	Leachate and/or waste seeps	
	Trash, debris and/or other waste materials	
Releases or Potential Releases	Dumping or disposal areas	
	Construction/demolition debris and/or dumped fill dirt	
	Surface water discoloration, odor, sheen, and/or free floating product	
	Strong, pungent or noxious odors	
	Exterior pipe discharges and/or other effluent discharges	
	Surface water bodies	
Other Notable Site	Quarries or pits	
Features	Wells	
	12 Inch concrete patch area	X

# Site Operations, Processes, and Equipment

#### Air compressors

One electric air compressor was observed in the wood shop building. The air compressor was located on concrete flooring. Surficial staining or releases were not observed on or in the vicinity of the air compressor at the time of the visual reconnaissance. The air compressor does not appear to constitute a REC for the site.

#### Ventilation hoods and/or incinerators

A spray booth for the application of stains and lacquer to wooden furniture was inside the wood shop. Small quantities of lacquer and stain are purchased on an as needed basis and no large quantities are stored on the site. Liquid wastes generated from the finishing process and cleaning of the spray guns reportedly either volatilize or are cleaned-up using rags which are disposed in the dumpster. An air emissions permit is reportedly not required for the spray booth activities on the site. The spray booth does not appear to constitute a REC for the site. However, liquid wastes and used rags associated with the spray booth activities in the site's wood shop should be properly disposed at an appropriate off-site facility.

#### Heating and/or cooling systems

The office areas of the building on the site are heated and cooled with electric powered roof mounted heating ventilation and air conditioning (HVAC) systems. The wood shop areas are heated with forced air natural gas heaters and cooled with evaporative coolers.

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# Underground Chemical or Waste Storage, Drainage or Collection Systems

#### Sump/Oil Water Separator

Two metal grate covered sumps were observed in the wood shop and in the clay shop during the site reconnaissance. The sump dates of construction are unknown, but are believed to have been installed in the late-1940s during the original construction of the building. The sumps have been out of service for several years. Evidence of cracked concrete, staining and surface releases were observed inside and within the vicinity of the sumps at the time of the site reconnaissance. Based on the age of the sumps, prior automotive service activities, and observed conditions, the sumps represents a REC in connection with the site.

#### **Electrical Transformers/PCBs**

# Transformers and/or capacitors

During Terracon's site visit, one pad-mounted transformer, owned and serviced by Tucson Electric Power (TEP), was observed on the site; however, no information with regard to PCB content of the transformer fluids was observed. Transformers contain mineral oil which may contain minor amounts of PCB and could be considered "PCB contaminated" (PCB content of 50-500 ppm). TEP maintains responsibility for the transformer, and if the transformer was "PCB contaminated," the utility company is not required to replace the transformer fluids until a release is identified. However, no evidence of current or prior release was observed in the vicinity of the electrical equipment during the site reconnaissance. As a result, the transformer does not represent a REC for the site.

#### Other Notable Site Features

A 12 inch circular concrete patched area was observed inside the wood shop area. This area may be a removed piston associated with a subsurface hydraulic lift or an area where a previous boring was advanced. Mr. Studwell, the owner of the site had no knowledge of this feature. Based on the subsurface nature and unknown use, this feature represents a REC in connection with the site.

# 5.4 Site Reconnaissance Summary

Based on the site reconnaissance, two out of service sumps inside the wood and clay shops were identified. In addition, a circular 12 inch concrete patched area was observed inside the wood shop. The two sumps and unknown circular concrete patched area represent RECs to the site.

# 6.0 ADJOINING PROPERTY RECONNAISSANCE

Visual observations of adjoining properties (from site boundaries) are summarized below.





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# **Adjoining Properties**

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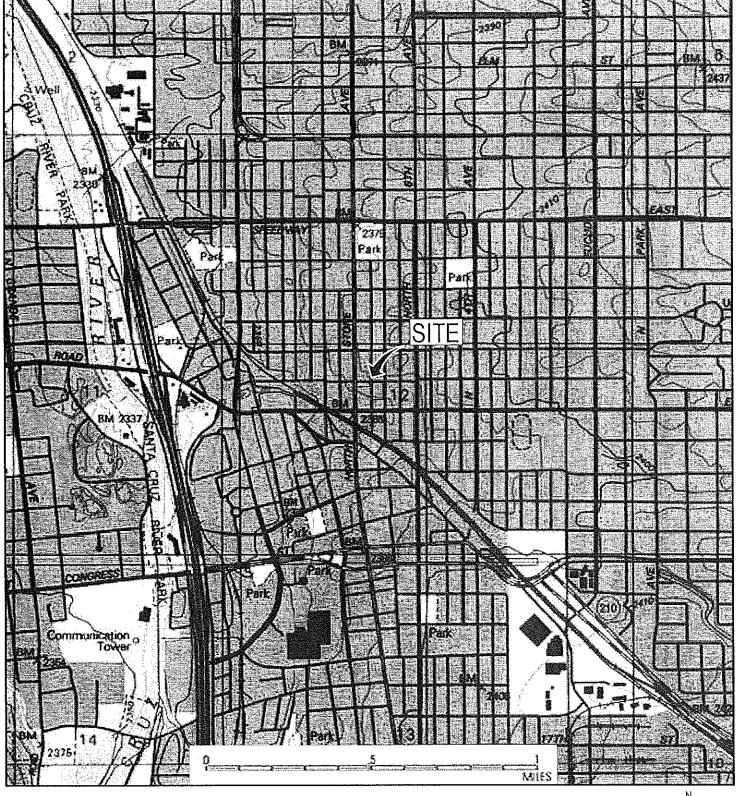
Direction	Description
North	East 5 <sup>th</sup> Street followed by single-family residences and Primarily Japanese Auto Center
East	North 7 <sup>th</sup> Avenue followed by single-family residences and AFR Collision and Refinishing Center
South	Alley Art Glass Studio and a vacant commercial structure
West	Vacant land, Arizona Trail Association and Stone Avenue followed by Enterprise Rent-A-Car

Indications of RECs were not observed with the adjoining properties.

# 7.0 DECLARATION

I, David M. Matson, declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312; and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the site. I have developed and performed the All Appropriate Inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

# APPENDIX A EXHIBIT 1 – TOPOGRAPHIC MAP EXHIBIT 2 – SITE DIAGRAM



LEGEND

APPROXIMATE SITE BOUNDARY

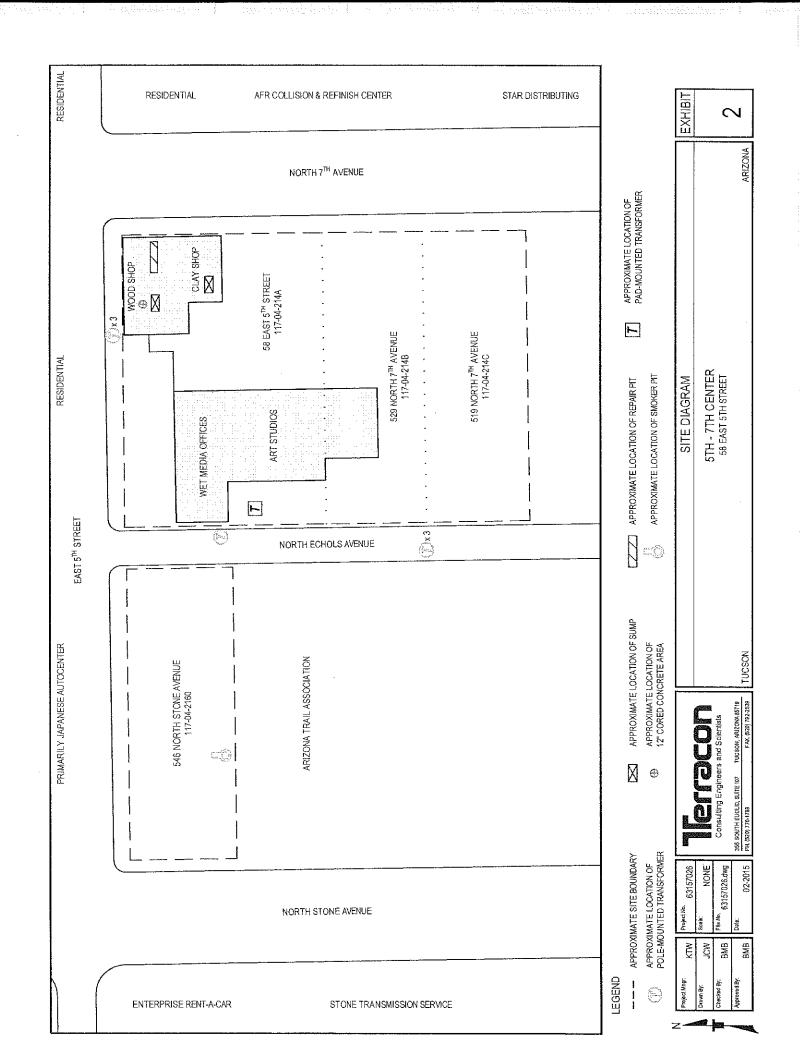
REF: TUCSON, ARIZONA 7.5-MINUTE USGS MAP, 1996

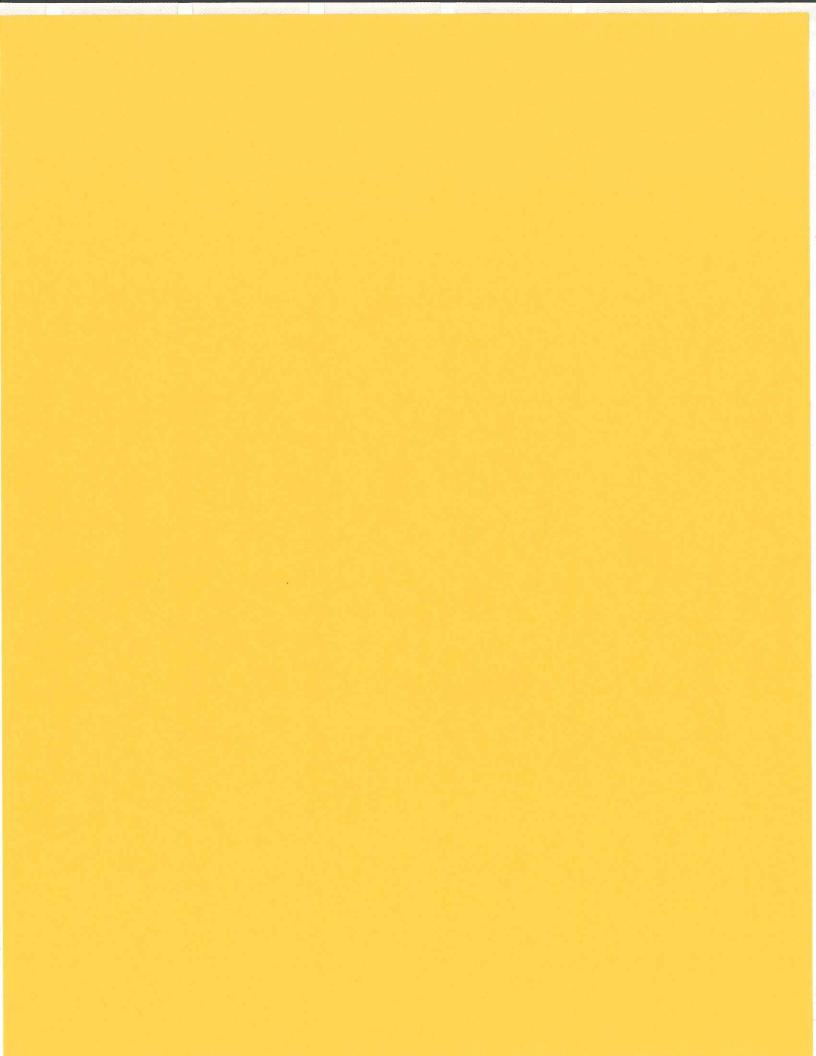
Project Mngr.	KTW	Projed No. 63157026
Drawn By:	JCW	Scale: AS SHOWN
Checked By:	вмв	File No. 63157026.dwg
Approved By:	вмв	Date: 02-2015

153	<b>lecacon</b>
	Consulting Engineers and Scientists

Consulting Engineers and Scientists	5TH - 7TH CENTEI 58 EAST 5TH STREET
355 SOUTH EUCLID, SUITE 107 TUCSON, ARIZONA 857 19	7(1000)
PH. (520) 770-1789 FAX. (520) 792-2539	TUCSON

TOPOGRAPHIC MAP	EXHIB!
5TH - 7TH CENTER 58 EAST 5TH STREET ARIZONA	1





# PARTIAL

# **Limited Site Investigation Report**

7<sup>th</sup> Avenue Commons
58 East 5<sup>th</sup> Street and 519/529 North 7<sup>th</sup> Avenue
APNs 117-04-214A, -214B, and -214C
Tucson, Pima County, Arizona
February 3, 2016
Terracon Project No. 63157137



Prepared for: Gardner Capital Development, LLC St. Louis, Missouri

> Prepared by: Terracon Consultants, Inc. Tucson, Arizona

terracon.com





February 3, 2016

Mr. Michael Gardner
Gardner Capital Development, LLC
800 Maryland Avenue, Suite 910
St. Louis, Missouri 63105
c/o Reid Butler
Butler Housing Company, Inc.

Telephone:

(314) 561-5900

E-mail:

Michael@gardnercapital.com

Re:

**Limited Site Investigation** 

Subsurface Soil and Soil Vapor Sampling

7<sup>th</sup> Avenue Commons

58 East 5th Street and 519/529 North 7th Avenue

Tucson, Arizona 85705 Project No. 63157137

Dear Mr. Gardner:

Terracon Consultants, Inc. (Terracon) is pleased to submit this Limited Site Investigation (LSI) Report for the above referenced site to Gardner Capital Development, LLC (client). Terracon performed subsurface soil sampling and soil vapor sampling at the site on December 30 and 31, 2015 in general accordance with our proposal and Agreement for Services dated June 3, 2015 (Terracon Proposal No. P63150153) and signed by the client on December 17, 2015.

We appreciate the opportunity to be of service to you on this project. Please contact the undersigned at 520-770-1789 if you have any questions regarding this document.

Sincerely,

Terracon

Derek Koller

Project Manager

Dave M. Matson, CHMM

Hanksmire

**Environmental Department Manager** 

Senior Associate

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APPENDIX C - BORING LOGS

APPENDIX D - ANALYTICAL REPORTS AND CHAIN OF CUSTODY

Limited Site Investigation
7<sup>th</sup> Avenue Commons № Tucson, Arizona
February 3, 2016 № Terracon Project No. 63157137



## 1.0 INTRODUCTION

## 1.1 Site Description

Site Name	7th Avenue Commons	
Site Location/Address .	58 East 5th Street and 519/529 North 7th Avenue, Tucson, Arizona	
Land Area	Approximately 1.13 acres.	
Site Improvements	The site is developed with an approximate 3,400 square foot Quonset building, located on the northeast portion of the site, and two connected buildings totaling approximately 9,000 square feet which are located on the western portion of the site. The remainder of the site is undeveloped and/or paved.	

It is Terracon's understanding proposed redevelopment at the site will consist of an apartment complex. Terracon further understands that the buildings west of the Quonset building will remain and be used in conjunction with the new development. Terracon understands that Quonset building was slated to be demolished, but now may be extensively renovated and repurposed as part of the new development.

## 1.2 Scope of Work

#### Previous Investigation

A Phase I Environmental Site Assessment (ESA) Report was completed by Terracon and submitted to the client on February 37, 2015 (Terracon Project No. 63157026). The Terracon Phase I ESA Report covered the site addressed in this LSI report and the vacant lot located west of the north portion of the site (APN 117-04-2160). The Phase I ESA identified the following recognized environmental conditions (RECs) in connection with the site:

- REC 1: This site is within the 7<sup>th</sup> Street and Arizona Avenue groundwater plume. The groundwater beneath the site is estimated to be at a depth of approximately 175 feet below ground surface (bgs) and is not used for drinking purposes. The Tucson Water Company provides municipal water to the site from other sources which meet federal and state drinking water standards. The Responsible Parties have been identified and are cooperating in the cleanup relating to the plume. The proposed future use of the site will be multi-family residential apartment buildings; therefore, potential vapor intrusion from PCE-contaminated groundwater constitutes a REC at the site.
- REC 2: As a result of the historical review of the site and adjoining areas, Terracon identified historical tanks, historical automotive repair operations, and former dry cleaning operations with in the vicinity of the site that may have impacted soil or soil vapor at the site. These historic uses constitute a REC for the site.



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7<sup>th</sup> Avenue Commons ■ Tucson, Arizona
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- REC 3: Two metal grate covered oil water separators (sumps) were observed in the wood shop and in the clay shop during the site reconnaissance. The sumps' dates of construction are unknown, but they are believed to have been installed in the 1940s during the original construction of the building. The sumps have been out of service for several years. Evidence of cracked concrete, staining and surface releases was observed inside and within the vicinity of the sumps at the time of the site reconnaissance. Based on the age of the sumps and observed conditions, the sumps represent a REC in connection with the site.
- REC 4: A circular 12 inch concrete patched area was observed inside the wood shop area. This area may be a removed piston associated with a subsurface hydraulic lift or an area where a previous boring was advanced. Mr. Studwell, the owner of the site had no knowledge of this feature. This unknown circular concrete patched area represents a REC to the site.
- REC 5: Gasoline USTs were historically on the site. Records obtained from the City of Tucson Development Services Department indicate that in 1956 a 1,000-gallon gasoline UST was replaced with two 2,000-gallon gasoline USTs. The EDR Report did indicate that three USTs were removed in 1986 and one UST was removed in 1987. Complete records of the removal and subsequent soil sampling for these USTs were not found. These former USTs represent a REC to the site.

To address the RECs identified in Terracon's Phase I ESA Report, Terracon developed the following scope of work:

#### Task 1 – Underground Utility Location

Prior to conducting the field investigation, Terracon contacted Arizona 811 to arrange for public underground utility locates at the site. Additionally, Terracon subcontracted a private utility locator to aid in line location prior to intrusive activities.

#### Task 2 – Soil Gas Sampling – RECs 1, 2, and 5

Terracon proposed to conduct soil gas sampling at the site to address potential soil vapor impacts from the 7<sup>th</sup> Street and Arizona Avenue groundwater plume, historical automotive maintenance operations, and former USTs at the site.

Specifically, Terracon proposed to collect two interior sub-slab soil gas samples, two exterior sub-grade soil gas samples, and one ambient air sample. The soil gas samples and ambient air sample were analyzed for drycleaning-related solvents (perchloroethylene [PCE], Trichloroethylene [TCE], dichloroethane [DCE], and vinyl chloride) and petroleum-related volatile organic compounds (VOCs) (benzene, ethylbenzene, toluene, and xylene) by EPA Method TO-15.

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Limited Site Investigation

7<sup>th</sup> Avenue Commons ■ Tucson, Arizona February 3, 2016 ■ Terracon Project No. 63157137

## Task 3 – Sub-Grade Soil Sampling – REC 2

Terracon proposed to perform soil sampling at the site to address potential impacts from historical automotive maintenance operations.

Specifically, Terracon proposed to advance four borings to a depth of 5-feet below ground surface (bgs) (or auger refusal) in areas potentially impacted by historical automotive operation. These soil samples were be analyzed for VOCs by EPA Method 8260, polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270SIM, and RCRA 8 Metals by EPA Method 6010/7470.

## Task 4 - Sub-Slab Soil Sampling - RECs 3 and 4

Terracon proposed to perform sub-slab soil sampling to address potential impacts from historical automotive maintenance operations as they relate to the two sumps and potential former hydraulic lift located within the Quonset building at the site.

Specifically, Terracon proposed to core the concrete and advance borings in the following three locations within the Quonset Building: In close proximity to the north sump, the south sump, and the potential former hydraulic lift. The borings located in the vicinity of the sumps were advanced to a depth of 3-feet bgs (auger refusal) and the boring located adjacent to the potential lift was advanced to a depth of 12-feet bgs. These soil samples were analyzed for VOCs by EPA Method 8260, PAHs by EPA Method 8270SIM, and RCRA 8 Metals by EPA Method 6010/7470. In addition, the soil sample collected from the boring located in close proximity to the potential former hydraulic lift was also analyzed for polychlorinated biphenyls (PCBs) by EPA Method 8082.

The site features are illustrated on the Site Plan in Exhibit 1 in Appendix A. A client-provided figure of the proposed new development is provided in Exhibit 2, Appendix A.

#### 1.3 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either expressed or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, our client, as set forth in our proposal, and were not intended to be in strict conformance with ASTM E 1903-11.

### 1.4 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of

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7<sup>th</sup> Avenue Commons ₪ Tucson, Arizona
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hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this investigation. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

#### 1.5 Reliance

This LSI Report has been prepared for the exclusive use and reliance of Gardner Capital Development, LLC and Butler Housing Company, Inc. Use or reliance by any other party is prohibited without the written authorization of Gardner Capital Development, LLC and Terracon. Reliance on the report by the client will be limited to terms, conditions, and limitations stated in our proposal and Agreement for Services dated June 3, 2015 (Terracon Proposal No. P63150153) and signed by the client on December 17, 2015.

### 1.6 Conflict Certification

Consultant has no present or contemplated future ownership interest or financial interest in the real estate that is the subject of this LSI Report, no personal interest with respect to the subject matter of the LSI Report or the parties involved, and no relationship with the property or the owners thereof which would prevent an independent analysis of the environmental or other conditions of the property.

## 2.0 FIELD ACTIVITIES

## 2.1 Health and Safety Plan

A Site Health and Safety Plan (HASP) was developed to document potential health concerns associated with proposed site activities, health hazards associated with the contaminants anticipated to be encountered, and identify emergency response procedures and personnel responsibility in the event of an emergency response. The HASP was prepared per Occupational Safety and Health Administration (OSHA) requirements (29 CFR 1910.120). Work was performed using OSHA Level D work attire consisting of hard hats, safety glasses, protective gloves, and protective boots.



At Terracon, we all have a personal and uncompromising commitment to everyone going home safely each and every day. Our safety program, *Incident and Injury Free®* (IIF) is about care and concern for

people. It is our personal and organizational commitment at all levels of the company and is

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Tucson, Arizona

Tebruary 3, 2016 

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where safety is held as a core value as well as an operational priority. Working safely is an inseparable part of working correctly, just as much as other operational priorities, in particular quality, profitability and schedule. As part of our IIF process, we prepared a "Pre-Task Plan" to identify the potential site safety and job hazards associated with the work we proposed at this site. Prior to commencement and during the on-site activities, we re-evaluated potential job hazards and appropriate safe working procedures. A tailgate safety meeting was held by Terracon prior to site access and field work. Onsite workers signed the safety meeting attendance sheet.

## 2.2 Soil Gas Sampling (RECs 1, 2, and 5)

### Interior Sub-slab Sample Point Installation

On December 30, 2015, Terracon installed two vapor probe tips within the structure located on the western portion of the site which Terracon understands will be renovated into a two-story apartment building and used in conjunction with the new development (Please note that Terracon did not install soil vapor sampling points within the footprints of the other proposed buildings because it is our understanding that the first floor of those structures will not be used as living space). The approximate locations of the interior sampling points are illustrated on Exhibit 1 and were as follows:

- SV-1 was installed underneath the slab within an interior art studio of the two interconnected structures on the west portion of the site (approximately 10 feet west of the east wall and approximately 55 feet south of the northern end of the structure).
- SV-2 was installed underneath the slab within an interior storage room of the two interconnected structures on the west portion of the site (approximately 10 feet west of the east wall and approximately 45 feet north of the southern end of the structure).

To install the two interior vapor probe tips, the concrete slab was penetrated to soil with a drill to approximately six-inches below the bottom of the slab. A stainless steel vapor probe tip was attached to Tygon tubing which was inserted into the drill hole and surrounded with clean silica sand. The remainder of the borehole was backfilled with quick dry concrete patch and molding clay was used to seal the borehole at slab level. The open end of the tubing at the surface was capped to prevent entry of ambient air into the vapor probe. During the 24-hour stabilization period, orange buckets with 'Do Not Disturb' notes provided by the landlord were set over the sample connection points in order to protect them.

## Exterior Sub-grade Sample Point Installation

On December 30, 2015, Terracon installed two vapor probe tips within the footprint of the proposed two-story apartment building. The approximate locations of the interior sampling points are illustrated on Exhibit 1 and were as follows:

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SV-3 was installed at a latitude of approximately 32.22885° North and a longitude of approximately 110.97050° West

SV-4 was installed at a latitude of approximately 32.22852° North and a longitude of approximately 110.97083° West

To install the exterior vapor probe tips, Terracon used a hollow stem auger drill rig to advance the borings to a depth of approximately 5-feet bgs. Terracon then installed a temporary sampling point in each 5-foot borehole to collect subsurface soil gas samples. The construction materials consisted of a polyethylene vapor probe tip attached to Tygon tubing. The vapor points were set at a depth of approximately 5-feet bgs within the boreholes and surrounded by silica sand. The top of the sand layer was then sealed with hydrated bentonite to 3-6 inches below surface grade. The open end of the tubing at the surface was capped to prevent entry of ambient air into the vapor probe. During the 24-hour stabilization period, orange cones were set over the sample connection points in order to protect them.

## Soil Gas Sample Collection

Soil gas samples were collected on December 31, 2015, after a stabilization period of approximately 24 hours. To ensure the integrity of the sampling train, the following steps were taken for the sub-slab and sub-grade sampling points:

- Vapor samples were collected using laboratory-supplied and evacuated 1-liter Summa canisters that were pre-tested and individually-certified as being free of contaminants of concern by the analytical laboratory.
- The Summa canisters were connected to the sampling ports using dedicated Tygon sample tubing and were equipped with laboratory-supplied and -calibrated flow regulators allowing for sample collection at a flow rate of less than or equal to 200 milliliters per minute (ml/min).
- Prior to soil gas sample collection, the soil gas sampling point and sampling train was tested for leaks using a shroud filled with helium tracer gas. Approximately three 500-ml volumes were purged from the soil gas sampling point through the sample train tubing prior to sample collection. The purged gas was collected into Tedlar® bags using a peristaltic pump. These volumes were tested for the presence of helium with a Helium meter (MGD-2002®) to confirm the tightness of the sample train and port. Helium tracer gas was only detected in a concentration of 0.0007% in the first purged volume from sampling point SV-1 and in a concentration of 0.0012% in the second purged volume from sampling point SV-2. The other purged volumes did not contain a detectable amount of helium.
- Once the integrity of the sampling point and train had been verified, samples were collected at the sub-slab and sub-grade sampling points (Samples SV-1 through SV-4) by opening the flow regulator valve and noting the beginning vacuum pressure on the

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regulator gauge for each Summa canister. Sampling continued until the vacuum pressure on the regulator gauge was near 1 pound per square inch (psi). At that time the flow regulator was closed. Sampling times were approximately five minutes.

- One (1) ambient air sample (AMB-1) was also collected from the site exterior for comparison purposes and as an additional quality control measure for the project.
- Upon completion of soil gas sample collection, the Summa canisters were closed, secured, and appropriately labeled with pertinent sample information.
- Soil gas samples collected during the investigation were shipped overnight to ESC Lab Sciences (ESC) using standard chain-of-custody procedures.

## 2.3 Sub-Grade Soil Sampling (REC 2)

A total of four (4) soil borings (S-1 through S-4) were advanced on December 30, 2015. The approximate locations of the exterior sampling points are illustrated on Exhibit 1 and were as follows:

- S-1 was installed at a latitude of approximately 32.22872° North and a longitude of approximately 110.97059° West.
- S-2 was installed at a latitude of approximately 32.22868° North and a longitude of approximately 110.97048° West.
- S-3 was installed at a latitude of approximately 32.22864° North and a longitude of approximately 110.97058° West
- S-4 was installed at a latitude of approximately 32.22859° North and a longitude of approximately 110.97049° West

The exterior borings were advanced to approximately 6-feet bgs. Drilling services were performed by Geomechanics Southwest, Inc. (GSI); a State of Arizona licensed driller, using a truck-mounted CME 75 hollow stem auger drilling rig under the supervision of Terracon field personnel and soil samples were collected using a California modified split-spoon sampler.

Three soil samples were collected from each boring at depths of approximately 1 to 2, 3 to 4, and 5 to 6 feet bgs. While conducting drilling, Terracon operated and maintained a PID as outlined in Section 2.5. The boring logs are provided in Appendix C.

Samples for VOC analysis were retrieved immediately from the split-spoon sampler and preserved in the field with methanol using the protocol outlined in Section 2.6. Samples collected for PAH, and RCRA 8 Metal analysis were placed into 4-ounce (oz.) glass jars provided by the analytical laboratory. The 4-oz. glass jars were filled to the top, with care taken to prevent soil from remaining in the lid threads prior to being closed to prevent potential contaminant migration to or from the sample. Soil samples were placed on ice and submitted to the laboratory.

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Because the PID readings of the collected soils were all 0.0 and no other field evidence of impact was noted during sampling, Terracon selected only the deepest soil sample from each boring (S-1 5', S-2 5', S-3 5', S-4 5') for laboratory analysis. The laboratory held the remaining samples until the initial analytical reports could be reviewed.

Prior to conducting sampling and between sampling events, Terracon used the decontamination procedures outlined in Section 2.7.

## 2.4 Sub-Slab Soil Sampling (RECs 3 and 4)

On December 30, 2015, GSI cored the concrete slab and three interior soil borings (N SUMP, S SUMP, and LIFT) were advanced in the Quonset building located on the northeast portion of the site. The approximate locations of the interior sampling points are illustrated on Exhibit 1 and were as follows:

- N SUMP was installed at a latitude of approximately 32.22882° North and a longitude of approximately 110.97049° West.
- S SUMP was installed at a latitude of approximately 32.22875° North and a longitude of approximately 110.97044° West.
- LIFT was installed at a latitude of approximately 32.22885° North and a longitude of approximately 110.97050° West

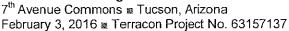
Drilling services for boring N SUMP and LIFT were performed by GSI using a Bobcat-mounted 'Big Beaver' hollow stem auger drilling rig under the supervision of Terracon field personnel and soil samples were collected using a California modified split-spoon sampler. Boring S SUMP was advanced by Terracon field personnel using a hand-auger which was also used to collect samples.

Terracon originally intended on advancing borings N SUMP and S SUMP to a depth of 6 feet bgs and collecting samples at 3 to 4 feet bgs and 5 to 6 feet bgs. However, auger refusal was encountered at 4-feet bgs at boring N SUMP and 2.5-feet bgs at boring S SUMP. Therefore, Terracon only collected one soil sample from each of these two borings. The soil sample collected from N SUMP was collected at a depth of approximately 3 to 4 feet bgs and the soil sample collected from S SUMP was collected at a depth of approximately 2 to 2.5 feet bgs.

Three soil samples were collected from boring LIFT at depths of approximately 4 to 5, 8 to 9 and 12 to 13 feet bgs. While conducting drilling, Terracon operated and maintained a PID as outlined in Section 2.5. The boring logs are provided in Appendix C.

Samples for VOC analysis were retrieved immediately from the split-spoon sampler and preserved in the field with methanol using the protocol outlined in Section 2.6. Samples collected for PAH, PCB, and/or RCRA 8 Metal analysis were placed into 4-ounce (oz.) glass jars provided by the analytical laboratory. The 4-oz. glass jars were filled to the top, with care taken

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to prevent soil from remaining in the lid threads prior to being closed to prevent potential contaminant migration to or from the sample. Soil samples were placed on ice and submitted to the laboratory.

Prior to conducting sampling and between sampling events, Terracon used the decontamination procedures outlined in Section 2.7.

### 2.5 Photoionization Detector

During field operations, Terracon field personnel operated and maintained a PID. The PID was held near the boreholes during advancement and used to screen soil samples. While collecting samples for laboratory analysis, additional soil was bagged and screened with the PID. Elevated readings were not encountered during field activities; the PID responses remained low with readings of 0.0 parts per million (ppm) for the duration of the field activities.

### 2.6 Methanol Preservation

Samples collected for VOC analysis were preserved in the field using methanol. Approximately 5 grams of soil was removed directly from the split-spoon sampler or hand auger immediately upon retrieval using a Terracore or equivalent sampler. The sample was placed into a 40 milliliter (mL) volatile organic analysis (VOA) sample vial containing methanol, and caution was taken not to spill the methanol or get soil particles on the rim of the sample vial. The sample was gently agitated such that the soil was completely immersed in the methanol.

#### 2.7 Decontamination Procedures

Decontamination procedures were conducted in accordance with ASTM D5088-15a, Standard Practice for Decontamination of Field Equipment Used at Waste Sites. Non-dedicated sampling equipment (e.g., split-spoon samplers, hand-auger, etc.) were cleaned using an Alconox® detergent wash and deionized water rinse at the commencement of field work and between sample collection events.

## 2.8 Investigation-Derived Waste (IDW)

No investigation-derived waste was generated during this project. Soil cuttings were returned to the borings (with the exception of S-1, which was used to install the soil vapor sampling point SV-3 after soil samples were collected) and any other excess soils were dispersed on the site grounds. Disposable personal protective equipment (PPE), used during the course of the investigation and in the collection of samples, was deemed non-hazardous and disposed of in a municipality-owned garbage receptacle.



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## 3.0 ANALYTICAL LABORATORY PROGRAM

Soil samples were submitted to Environmental Science Corporation (ESC) of Mt. Juliet, Tennessee, an Arizona Department of Health Services (ADHS) licensed analytical laboratory (ADHS License AZ0612), under proper chain of custody (COC) protocol. Please note that not all collected samples were analyzed by the analytical laboratory and further discussion of which samples were analyzed was provided in Sections 2.2 and 2.3). The table below provides a brief summary of the number of samples that were selected for analysis:

Sample Type	Analysis Performed / Method	No. of Samples Analyzed
Soil Gas Samples	Drycleaning-related and petroleum-related VOCs EPA Method TO-15	5
Sub-Grade Soil Samples	VOCs / EPA Method 8260 PAHs / EPA Method 8270SIM RCRA 8 Metals / EPA Method 6010/7471	4
Sub-Slab Soil Samples (Sumps)	VOCs / EPA Method 8260 PAHs / EPA Method 8270SIM RCRA 8 Metals / EPA Method 6010/7471	3
Sub-Slab Soil Samples (Lift)	VOCs / EPA Method 8260 PAHs / EPA Method 8270SIM PCBS / EPA Method 8082 RCRA 8 Metals / EPA Method 6010/7471	1

## 4.0 SAMPLING RESULTS AND EVALUATION

## 4.1 Soil Gas Sampling Result Summary

The soil gas samples were analyzed for eleven (11) VOC analytes. Of the 11, six (6) analytes were reported above laboratory detection limits in at least one of the five (SV-1 through SV-4 and AMB-1) soil gas samples collected at the site. The following were detected above laboratory detection limits within at least one of the soil gas samples: PCE, benzene, ethylbenzene, toluene, m&p-xylene, and o-xylene.

Terracon compared the reported concentrations of the above constituents identified in the soil gas samples collected at the site to screening concentrations calculated using the EPAs Vapor Intrusion Screening Level (VISL) Calculator that lists chemicals considered to be volatile and sufficiently toxic through the inhalation pathway; and provides VISLs for groundwater, soil gas and indoor air, which are generally recommended, media-specific, risk-based screening-level concentrations. The primary purpose of the VISL calculator is to assist site managers and risk assessors in determining, based on an initial comparison of site data against the VISLs: whether or not chemicals found in groundwater or soil gas pose a significant health risk through vapor intrusion; and, if so, whether a site-specific vapor intrusion investigation is warranted. Terracon



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utilized the VISL Calculator (Version 3.3.1) using Regional Screening Levels (RSLs) dated May 2014 and the default attenuation factor of 0.3 published by the EPA. The target sub-slab and exterior soil gas concentrations for this project were calculated using a Target Risk for Carcinogens (TCR) of 1x10<sup>-5</sup> based on the prescribed risk utilized in EPA vapor intrusion guidance for screening evaluations for residential properties and a Target Hazard Quotient for Non-Carcinogens (THQ) of 1.0. A residential exposure scenario was also utilized as the parameter for the VISL Calculator.

It should be noted that the ADEQ does not have current published vapor screening risk levels to compare with the analytical results. However, the ADEQ typically reserves the 1x10<sup>-6</sup> risk factor for sensitive receptor sites such as schools or daycare facilities and the 1x10<sup>-5</sup> risk factor is generally applied to standard residential uses. The EPA screening levels were calculated based on a prescribed risk of 1x10<sup>-5</sup> utilized in the EPA vapor intrusion guidance for screening evaluations for residential properties. Additionally, the ADEQ allows for soil remediation that results in a cumulative excess lifetime cancer risk between 1x10<sup>-6</sup> and 1x10<sup>-4</sup> and a Hazard Index no greater than one based on residential or non-residential exposure assumptions.

Using the VISL calculated RSLs based on prescribed risk of 1x10<sup>-5</sup>, the detected concentrations of the six (6) analytes reported above laboratory method detection limits in the four (4) soil gas samples and ambient outdoor air sample collected at the site did not exceed the calculated screening levels for sub-slab and exterior soil gas concentrations.

Table 1, summarizing the laboratory results for the soil gas sampling at the site, is provided in Appendix B. The analytical report is included in Appendix D of this report.

## 4.2 Sub-Slab Soil Sampling Results

The on-site soils encountered while advancing the sub-slab borings encountered consisted mainly of clayey sand to a depth approximately 8 feet bgs and sandy lean clay and clayey sand to a depth of approximately 13 feet bgs. Elevated PID responses (greater than 2 ppm) were not detected in the soil samples collected from the three (3) borings. Copies of the Boring Logs are provided in Appendix C.

VOCs were not detected above the laboratory method detection limits in the three sub-slab soil samples submitted for laboratory analysis.

Eleven (11) PAH compounds were detected in sample N SUMP in concentrations exceeding the analytical laboratory method detection limits but below applicable ADEQ soil remediation levels (SRLs). In addition, sample N SUMP contained concentrations of benzo(a)pyrene (0.121 milligrams per kilogram [mg/kg]) exceeding the ADEQ residential 10<sup>-6</sup> SRL of 0.069 mg/kg. PAH compounds were not detected in the other samples.

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PCBs were not detected above the laboratory method detection limits in the sub-slab sample submitted for laboratory analysis from the potential lift location.

Mercury, arsenic, barium, cadmium, total chromium, and lead were detected in the three subslab samples in concentrations exceeding the analytical laboratory method detection limits but below the applicable ADEQ SRLs.

Summary of detected PAH and metal constituents detected in sub-slab soil samples is provided in Appendix B, Tables 2 and 3. A copy of the soil sample analytical report is provided in Appendix D.

## 4.3 Sub-Grade Soil Sampling Results

The on-site soils encountered while advancing the sub-grade exterior borings encountered consisted mainly of clayey sand to a depth approximately 5 feet bgs and lean clay with sand to a depth of approximately 6 feet bgs. Elevated PID responses (greater than 2 ppm) were not detected in the soil samples collected from the four (4) borings. Copies of the Boring Logs are provided in Appendix C.

VOCs and PAHs were not detected above the laboratory method detection limits in the four subgrade soil samples submitted for laboratory analysis.

Mercury, arsenic, barium, cadmium, total chromium, and lead were detected in the three subslab samples in concentrations exceeding the analytical laboratory method detection limits but below the applicable ADEQ SRLs.

A summary of detected metal constituents in sub-grade soil samples is provided in Appendix B, Table 4. A copy of the soil sample analytical report is provided in Appendix D.

## 4.4 Quality Assurance / Quality Control Evaluation

Sample holding times, maintenance of required preservation (temperature, light conditions), surrogate recovery, matrix-spike/matrix-spike duplicate, and laboratory control sample/laboratory control sample duplicates were evaluated against method criteria for data acceptability. No results requiring rejection or qualification were identified in the reporting of sampling results. The ambient outdoor air sample (AMB-1) collected from the site exterior, did not reveal the presence of VOCs in outdoor air that are considered an environmental concern or that would have adversely affected the collected soil gas samples. Detailed information regarding quality control/quality assurance for the soil samples is reported in the analytical reports by ESC included in Appendix D.



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## 5.0 FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

## Findings and Conclusions

#### Soil Gas

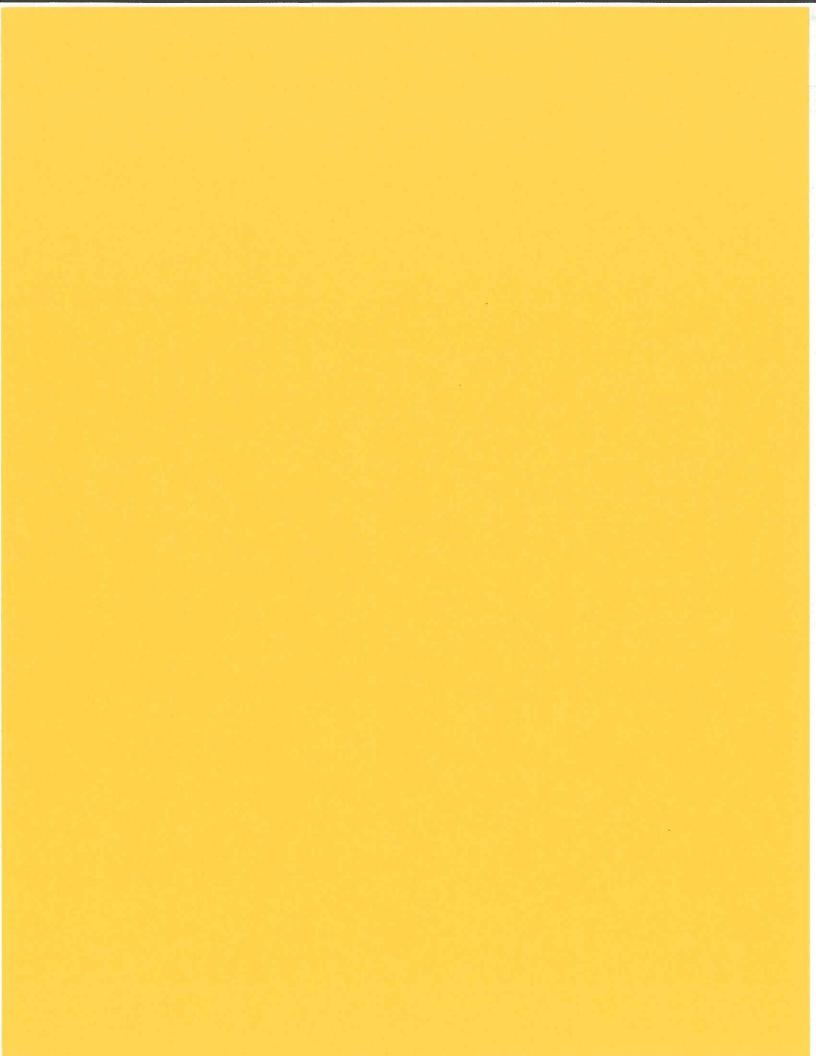
Four (4) soil gas samples were collected to assess if the contaminated groundwater plumes beneath the site or historic automotive repair or fueling activities are a potential vapor intrusion concern. Using the VISL calculated RSLs based on prescribed risk of 1x10<sup>-5</sup>, the detected concentrations of the six (6) analytes reported above laboratory method detection limits in the four (4) soil gas samples and ambient outdoor air sample collected at the site did not exceed the calculated screening levels for sub-slab and exterior soil gas concentrations.

#### Soil

Seven (7) borings were advanced and sampled to assess if the former historical uses at the site had impacted site soils. In summary, the analyzed samples contained mercury, arsenic, barium, cadmium, total chromium, and lead in concentrations exceeding the analytical laboratory method detection limits but below the applicable ADEQ SRLs. In addition sample N SUMP, contained 11 PAH compounds in concentrations exceeding the analytical laboratory method detection limits but below applicable ADEQ SRLs and concentrations of benzo(a)pyrene (0.121 milligrams per kilogram [mg/kg]) exceeding the ADEQ residential 10<sup>-6</sup> SRL of 0.069 mg/kg but below the ADEQ residential 10<sup>-5</sup> SRL of 0.69 mg/kg.

### Recommendations

Based on the analytical data of samples collected at the site, it is Terracon's opinion that the single elevated concentration of benzo(a)pyrene collected from sub-slab soils from Boring N SUMP does not warrant further investigation at this time. However, if soils in the vicinity of boring N SUMP are exported off-site; they should be transported to a Subtitle D Landfill for disposal and not utilized as "fill" at another property. Waste profiling may be required by the transporter and/or landfill prior to acceptance of the material.





#### SUBMITTAL REQUIREMENTS

### PLEASE PROVIDE THE FOLLOWING MATERIALS IN THIS ORDER:

	1. Application form (signed by the Property Owner or Authorized Agent — include letter of authorization).
	2. Written summary of neighborhood meeting with sign in sheet and agenda (if applicable).
	3. Project statement outlining scope of work.
	4. UDC compliance review <b>comments</b> (obtained at the 1 <sup>st</sup> floor).
	5. Pima county assessor's record parcel detail and record map.
	6. Color aerial <b>photograph</b> of subject property (if applicable).
	7. Color, labeled photographs of project site existing conditions (north, south, east and west elevations
	of all structures on the property) and surrounding area (if applicable).
	8. Color photographs of precedent examples in surrounding area, labeled with property addresses and
	keyed on the aerial photograph (if applicable).
	9. Site Plan (and landscape plan and floor plans if applicable) drawn to scale at 11"x17", folded*,
	prepared in accordance to Section 2-06.0:0, in the Administrative Manual.
.	10. Elevations (and contextual elevations if applicable) drawn to scale at 11"x17", folded*, dimensions,
	proposed materials (if applicable) prepared in accordance to Section 2-06.0.0.
	11. Samples, cut sheets and/or photographs of the type, color and texture of the proposed materials (if
	applicable).
	12. <b>PDF</b> of all above listed items (number of hard copies may be required).
	13. Applicable fees (payable to City of Tucson).
	14. (Other)

\*For 11" X 17" format "z" fold as follows: With plan face up bring right side to left side (text to text), align edges and crease right edge. Bring top corner of open edge (top panel only) down to center of right folded edge (creates a diagonal edge on left), align and crease.

Additional application materials may be required at the time of your meeting with staff.

Refer to Supplemental Information per review process for material instructions, etc.

For Zoning and Subdivision review, the Unified Development Code (UDC) applies to this application. If you feel the Land Use Code (LUC) should apply, please consult with Zoning review staff. Applicable timeframes can be provided at your request or found in Administrative Manual Sec. 3-02 or found on our website at <a href="http://cms3.tucsonaz.gov/pdsd">http://cms3.tucsonaz.gov/pdsd</a>. For information about applications or applicable policies and ordinance, please contact us at (520) 791-5550.

By state law, we cannot initiate a discussion with you about your rights and options, but we are happy to answer any questions you might have.



## APPLICATION

Case Number	Date Accepted:
PROPERTY LOCATION INFORMATION	
Property Development (Project) Name (IF APPLICABLE	): 7th Avenue Commons - Apartment Homes
Property Address: 58 E. FIFTH ST	REET, TUCSON, ARIZONA
Applicable Area/Neighborhood/Overlay: GIID	
Zoning: C-3	Historic Status:
Legal Description: See Legal Description attac	hed
Pima County Tax Parcel Number/s: 117-04-214A,	117-04-214B,117-04-214C
Site 1 = 48,708 s.f. (1. Site and Building Area (sq ft): Building S.F. (including	11Net Ac.) Site 2 = 12,745 s.f. (.30 Ac.) g Parking Deck on Site 2) = 74,550 s.f.
APPLICANT INFORMATION (The person processing the a	application and designated to receive notices):
APPLICANT NAME: Christopher D. Norstrom	
ADDRESS: Biltform Architectural Gr	oup - 11460 N. Cave Creek Rd. Unit 11
PHONE: ( 602 )285-9200	FAX: ( )
EMAIL: Chris@biltform.com	
PROPERTY OWNER NAME (If ownership in escrow, pleas	e note): Gardner Capital Development Lu
PHONE: (314) 561-5900	FAX: (314) 963-9995
PROJECT TYPE (check all that apply):  ( ) New building on vacant land ( ×) New addition to existing building	<ul><li>(x) Change of use to existing building</li><li>(x) New building on developed land</li><li>( ) Other</li></ul>
Related Permitted Activity Number(s):	
DESCRIPTION OF USE: 7th Avenue Commons is a propo	sed 50 unit - Adaptive Re-use Affordable Multi-Family Housing
I hereby certify that all information contained in this applic	cation is complete and true to the best of my knowledge.
DAW G	2/2/11
SIGNATURE OF OWNER/APPLICANT  FGIO W. BUTUNT F12  CARROWAY CAPIFE DOWN GLANDON	- \$/3//6 /Date
ARWEIT (47/14 DOVELEN VIM. Planning and Development Services Department	## Vpdated 12/16/15 Page 1 of 3



## CASE INFORMATION

(To be completed by PDSD staff at pre-application meeting)

CASE INFURMATION	
Case Number (E.g. HPZ-14-11, IID-15-01):	
Related Permitted Activity Number(s):	
Review Process (E.g. HPZ, DDO, IID – Major/Minor):	
Applicable Fees:	
Pre-Application Accepted by:	
Pre-Application Meeting scheduled for:	Date
1,10,10,10,10,10,10,10,10,10,10,10,10,10	Date
Additional Notes;	
	Mark Art
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Next Steps (E.g neighborhood meeting, recommendation from T-PCHC PRS, Design Pro	ofessional, etc.):
	··········
***************************************	- Anne Anne Anne Anne Anne Anne Anne Ann

## 7th Avenue Commons - Project Summary

7th avenue commons is a proposed 50 unit; 27 units in the existing two-story building (adaptive re-use) and 23 units in the new 3-level podium style building. A community center/clubhouse will be located at the northeast corner of the new apartment section. There will be parking on the existing north parking lot across Echols Ave. Southwest corner of echols and fifth street. There are 25 parking spaces on the ground level with a parking deck above, serving 11 additional spaces. New off-site street parking will be along 7th avenue and Fifth street totaling 27 spaces. The streetscape along 7th avenue, will include urban landscape and hardscape and public art. The parking deck along 5th street will be screened. The proposed development project will result in the adaptive re-use of the existing 12,000 warehouse/office building, and the construction of new parking deck on the current parking lot. The project will involve the development of an affordable housing community of approximately 50 apartments for families, (including apartments in the existing building). The project will include a combination of set-asides at 40%, 50% and 60% of median income

## LEGAL DESCRIPTION PER TITLE COMMITMENT NO. 600-38632-JM

LOTS 1, 4, 5 AND 8, BLOCK 58 OF THE CITY OF TUCSON, PIMA COUNTY, ARIZONA, ACCORDING TO THE OFFICIAL SURVEY, FIELD NOTES AND MAP AS MADE AND EXECUTED BY S.W. FOREMAN AND APPROVED AND ADOPTED BY THE MAYOR AND COMMON COUNCIL OF SAID CITY, (THEN VILLAGE), OF TUCSON, ON JUNE 26, 1872, A CERTIFIED COPY OF WHICH MAP IS OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF PIMA COUNTY, ARIZONA, IN BOOK 3

OF MAPS AND PIATS AT PAGE 70 THEREOF.

LOT 2 IN BLOCK 58 OF THE CITY OF TUCSON, ARIZONA, PIMA COUNTY, ARIZONA, ACCORDING TO THE OFFICIAL SURVEY, FIELD NOTES, AND MAP AS MADE AND EXECUTED BY S.W. FOREMAN AND APPROVED AND

ADOPTED BY THE MAYOR AND COMMON COUNCIL OF SAID CITY, (THEN VILLAGE), OF TUCSON, (THEN VILLAGE) OF TUCSON, ON JUNE 16, 7872, A CERTIFIED COPY OF WHICH MAP IS OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF PIMA COUNTY, ARIZONA IN BOOK 3 OF MAPS AND PLATS AT PAGE 70.

3/29/2016 Office of The Pima County Assessor Book-Map-Parcel: 117-04-214A Tax Area: <u>0150</u> Oblique Image Tax Year: Property Address: Street No Street Direction Street Name Location 58 Ε 5TH ST Tucson Taxpayer Information: Property Description: 5TH - 7TH CENTER LLC TUCSON LOTS 1 & 4 BLK 58 4729 E SUNRISE DR # 307 TUCSON AZ 85718-4534 Valuation Data: Assessment Ratio Land FCV Imp FCV Total FCV Limited Value Limited Assessed Valuation Year Legal Class COMMERCIAL (1) \$122,214 \$97,126 \$219,340 2016 18.0 \$175,256 \$31,546 COMMERCIAL (1) 2017 18.0 \$122,214 \$127,366 \$249,580 \$184,019 \$33,123 Property Information: Section: Town: 14.0 13.0E Range: 3/71 Map & Plat: Block: 058 Tract: Rule B District: Land Measure: 24394.00F Group Code: 400 Census Tract: 3710 (WAREHOUSING) Use Code: File Id: Date of Last Change: 11/22/2010 Commercial Characteristics: Property Appraiser: John Becker Phone: (520)724-3046 Commercial Summary Interface Total Sq Ft Cost Value **CCS** Override Market Override 10,080 \$157,879 \$127,366 \$0 Commercial Detail SEQ-SECT Construct Year Model/Grd **IPR RCN** RONLD Sq Ft Model Description 1946 372/3 0000000 6,690 \$281,064 \$106,804 WAREHOUSE DISTRIBUTION 001-001 \$51,075 QUONSET COMMERCIAL/INDUSTRIAL 1946 391/2 0000000 3,390 \$134,407 002-001 Valuation Area: Condo Market: 60 DOR Market: UN\_WEST\_UNIVERSITY MFR Neighborhood: SFR Neighborhood: 05006301 SFR District: 13 Sales Information: Affidavit of Fee Parcel Sale Time Adjusted Property Type Cash Validation Date Sale No. Count X JAC DEED: Warranty 20020240956 02/2002 Commercial/Industrial \$375,000 \$375,000 Deed Supervisor District: (5) RICHARD ELIAS

Recording Information:

Sequence No. Page Date Recorded Docket Type 20020240956 11730 3289 2/5/2002 WARRANTY DEED 97117534 10595 1589 7/25/1997

Petition Information:

Petition SBOE Tax Year Owner's Estimate

2011 \$152,800

Parcel Note: Click to see/expand 1 note(s)

Book-Map-Parcel: 117-04-214B Tax Year: Тах Агеа: <u>0150</u> Oblique Image Property Address: Street Direction Street No Street Name Location 7TH AV 529 Ν Tucson Taxpayer Information: **Property Description:** 5TH - 7TH CENTER LLC TUCSON LOT 5 BLK 58 4729 E SUNRISE DR # 307 TUCSON AZ 85718-4534 Valuation Data: Assessment Ratio Land FCV Imp FCV Total FCV Limited Value Valuation Year Legal Class Limited Assessed 2016 COMMERCIAL (1) 18.0 \$61,107 \$550 \$61,657 \$61,657 2017 COMMERCIAL (1) 18.0 \$61,107 \$550 \$61,657 \$61,657 \$11,098 Property Information: Section: 12 Town: 14.0 Range: 13.0E 3/71 Map & Plat: 058 Block: Tract: Rule B District: Land Measure: 12197.00F Group Code: Census Tract: 400 3710 (WAREHOUSING) Use Code: File Id: Date of Last Change: 11/22/2010 Commercial Characteristics: Property Appraiser: John Becker Phone: (520)724-3046 Commercial Summary CCS Override Interface Total Sq Ft Cost Value Market Override 0 \$550 \$0 \$550 Commercial Detail SEQ-SECT Construct Year Model/Grd **IPR** RCN RCNLD **Model Description** 0000000 001-001 501/3 \$26 1946 O \$10 Valuation Area: 60 Condo Market: DOR Market: 6 UN\_WEST\_UNIVERSITY MFR Neighborhood: 05006301 SFR Neighborhood: SFR District: 13 Sales Information: Affidavit of Fee Parcel Sale Time Adjusted Property Type Cash Validation No. Count Date X JAC DEED: Warranty 20020240956 02/2002 Commercial/Industrial \$375,000 \$375,000 Deed Supervisor District: (5) RICHARD ELIAS Recording Information: Sequence No. Docket Page Date Recorded Type 20020240956 3289 2/5/2002 WARRANTY DEED 11730 97117534 10595 1589 7/25/1997 Petition Information:

Petition SBOE

Tax Year

2011

Owner's Estimate

Parcel Note: Click to see/expand 2 note(s)

\$30,000

3/29/2016 Office of The Pima County Assessor Book-Map-Parcel: 117-04-214C Oblique Image Tax Year: Tax Area: 0150 Property Address: Street Direction Street Name Location Street No 7TH AV Tucson Ν **Property Description:** Taxpayer Information: 5TH - 7TH CENTER LLC TUCSON LOT 8 BLK 58 4729 E SUNRISE DR # 307 TUCSON AZ 85718-4534 Valuation Data: Legal Class Assessment Ratio Land FCV Imp FCV Total FCV Limited Value Limited Assessed Valuation Year 2016 COMMERCIAL (1) 18.0 \$61,107 \$550 \$61,657 \$61,657 \$11,098 2017 COMMERCIAL (1) 18.0 \$61,107 \$550 \$61,657 \$61,657 \$11,098 Property Information: Section: 12 Town: 14.0 13.0E Range: 3/71 Map & Plat: 058 Block: Tract: Rule B District: 12197.00F Land Measure: Group Code: Census Tract: 400 Use Code: 3710 (WAREHOUSING) File Id: 11/22/2010 Date of Last Change: Commercial Characteristics: Phone: (520)724-3046 Property Appraiser: John Becker Commercial Summary CCS Override Market Override Interface Total Sq Ft **Cost Value** \$550 0 \$550 \$0 Commercial Detail RCNLD Model Description SEQ-SECT Construct Year Model/Grd **IPR** Sq Ft RCN 001-001 1946 501/3 0000000 0 \$26 \$10 Valuation Area: 60 Condo Market: DOR Market: 6 UN\_WEST\_UNIVERSITY MFR Neighborhood: 05006301 SFR Neighborhood: 13 SFR District: Sales Information: Time Adjusted Affidavit of Fee Parcel Sale Property Type Cash Validation Date Sale Count Νo. X JAC DEED: Warranty 20020240956 02/2002 Commercial/Industrial \$375,000 \$375,000 Deed Supervisor District:

(5) RICHARD ELIAS Recording Information:

Sequence No. Docket Page Date Recorded Type WARRANTY DEED 20020240956 11730 3289 2/5/2002 97117534 10595 7/25/1997

Petition Information:

Tax Year Owner's Estimate Petition SBOE

2011 \$30,000

Parcel Note: Click to see/expand 2 note(s)

Book-Map-Parcel: 117-04-2160 Tax Year: Tax Area: 0150 Oblique Image Property Address: Location Street Name Street No Street Direction STONE AV Tucson 546 Property Description: Taxpayer Information: TUCSON LOT 2 BLK 58

5TH 7TH CENTER LLC ATTN: ANNE LOVELL 4729 E SUNRISE DR PMB 307

TUCSON AZ

85718-4534

Valuation Data:

Assessment Ratio Land FCV Imp FCV Total FCV Limited Value Limited Assessed Legal Class Valuation Year Vacant/Ag/Golf (2) 15.0 \$73,548 \$0 \$73,548 \$73,548 \$11,032 2016 \$73,182 \$73,182 \$10,977 15.0 \$73,182 2017 Vacant/Ag/Golf (2) \$0

Property Information:

Section: 12

14.0 Town: 13.0E Range: 3/71 Map & Plat:

Block: 058

Tract:

Rule B District: 1

12197.00F Land Measure:

Group Code:

400 Census Tract:

0021 (VACANT COMMERCIAL URBAN SUBDIVIDED ) Use Code:

File ld:

Date of Last Change: 9/12/2012

Valuation Area:

60 Condo Market: DOR Market:

UN\_WEST\_UNIVERSITY MFR Neighborhood:

05006301 SFR Neighborhood:

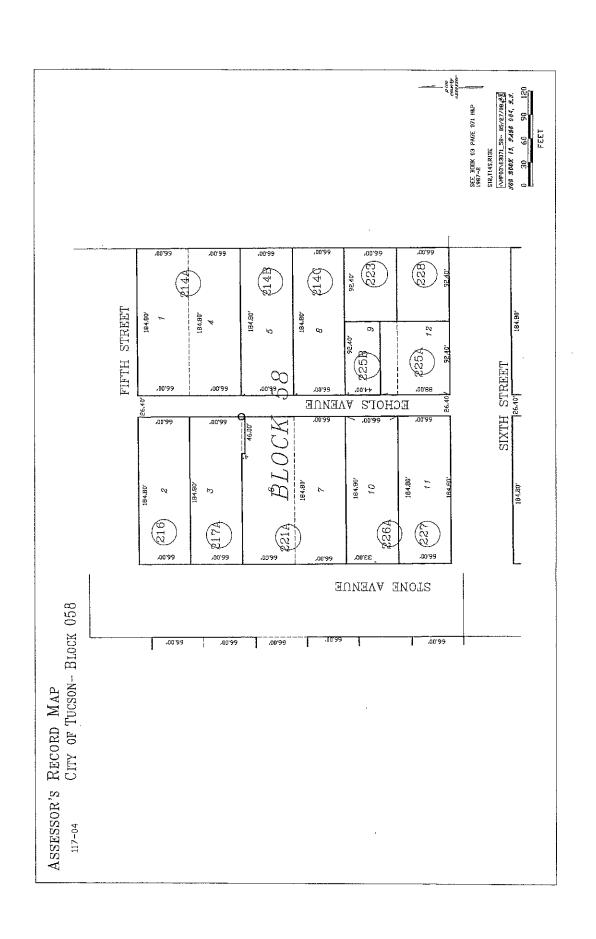
13 SFR District:

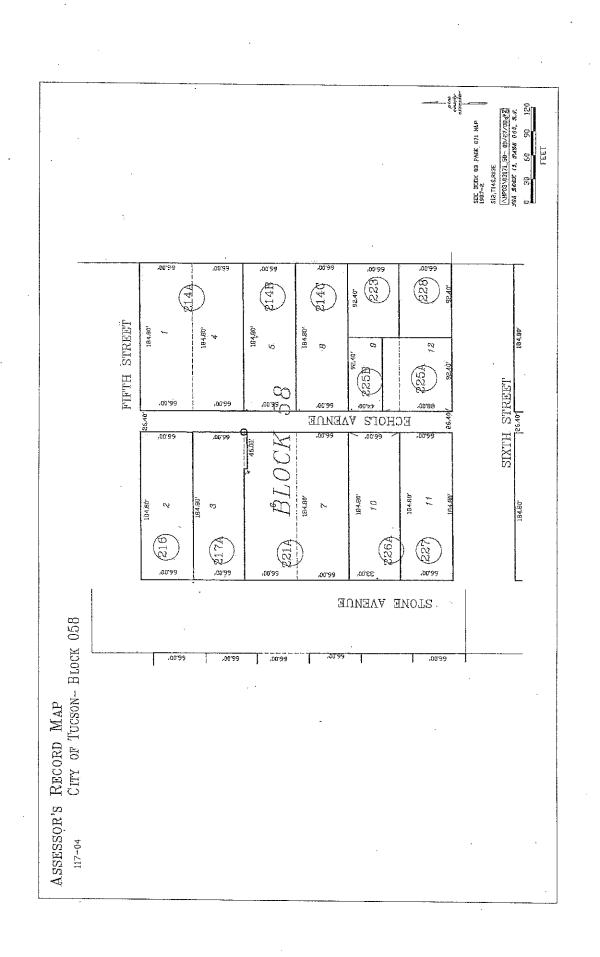
Supervisor District: (5) RICHARD ELIAS

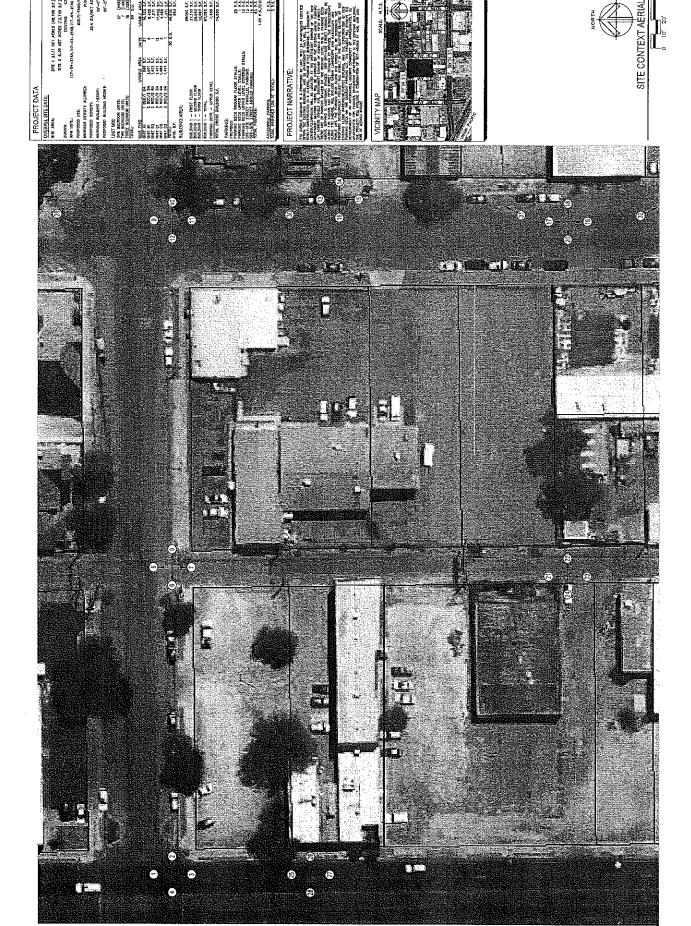
Recording Information:

Date Recorded Type Docket Page Sequence No. 11/23/2011 WARRANTY DEED 20113270313 1/6/1988 8196 984 0

Parcel Note: Click to see/expand 5 note(s)







architecture mrofilia

MALE JOEA 6,323 S.F. 6,323 S.F. 1,073 S.F. 1,473 S.F. 1,473 S.F. 1,473 S.F. 1,473 S.F. 1,473 S.F. 1,483 S.F. 1,483 S.F.

71h AVENUE COMMONS
8000 Maryland Avenue, Suite 910, Claylor, MO. 63105
8000 Maryland Avenue, Suite 910, Claylor, MO. 63105





# **EXISTING CONDITIONS PHOTO EXHIBIT**

7<sup>th</sup> Avenue Commons

Phoenix, Arizona

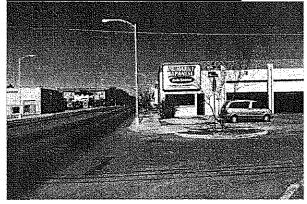
Architects Project No: 15-027

March 29, 2016



## 5<sup>th</sup> STREET AND STONE AVENUE

1.Southeast Corner facing North



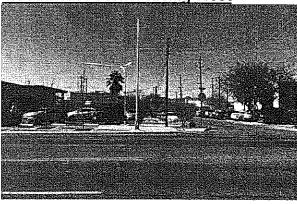
2.Southeast Corner facing East



3.Southeast Corner facing South



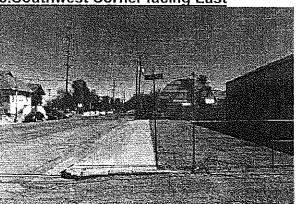
**4.Southeast Corner facing West** 



5<sup>th</sup> STREET AND ECHOLS AVENUE

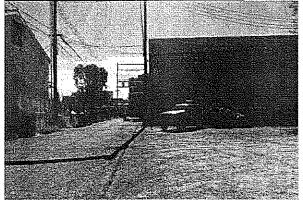


6.Southwest Corner facing East

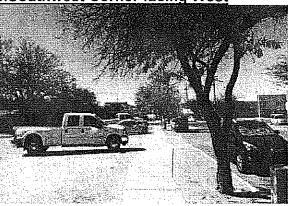




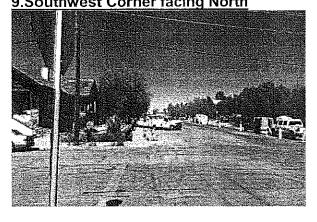
7.Southwest Corner facing South



8. Southwest Corner facing West



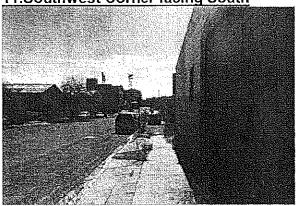
5<sup>th</sup> STREET AND 7<sup>th</sup> AVENUE 9.Southwest Corner facing North



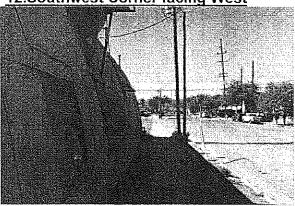
10.Southwest Corner facing East

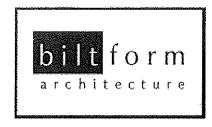


11.Southwest Corner facing South



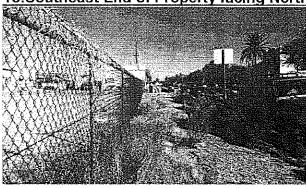
12.Southwest Corner facing West

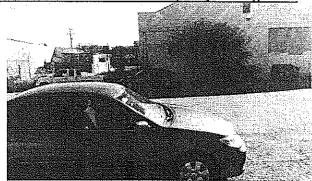




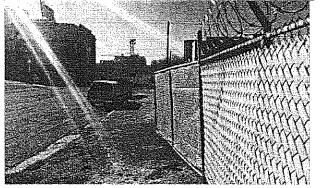
## 7th STREET MIDPOINT

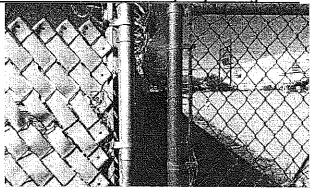
13.Southeast End of Property facing North 14.Southeast End of Property facing East





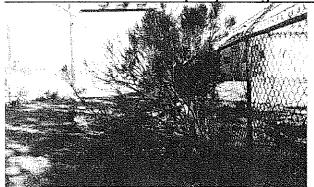
15. Southeast End of Property facing South 16. Southeast End of Property facing West

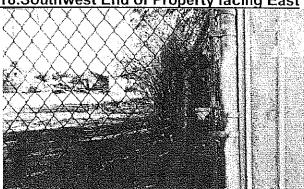




## **ECHOLS AVENUE MIDPOINT**

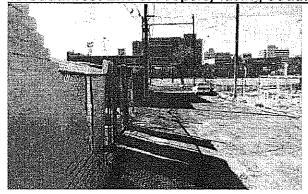
17. Southwest End of Property facing North 18. Southwest End of Property facing East



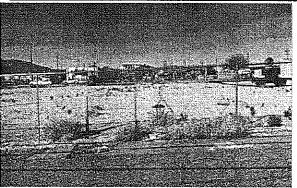




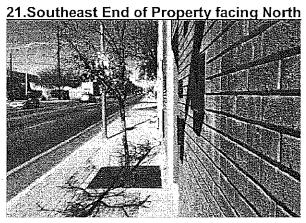
19.Southwest End of Property facing South



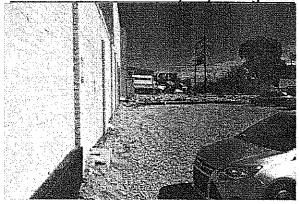
20.Southwest End of Property facing West



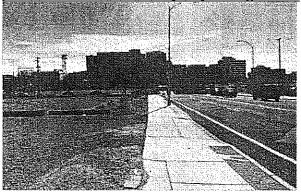
**ECHOLS AVENUE** 



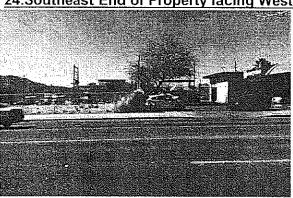
22.Southeast End of Property facing East



23. Southeast End of Property facing South



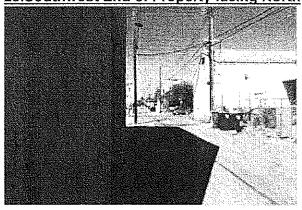
24. Southeast End of Property facing West

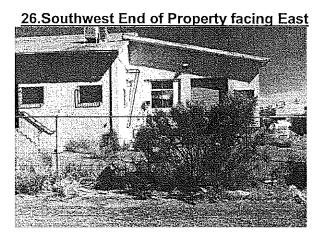




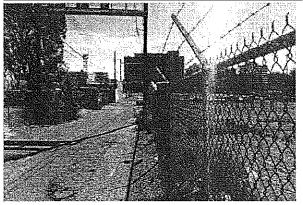
## **STONE AVENUE**

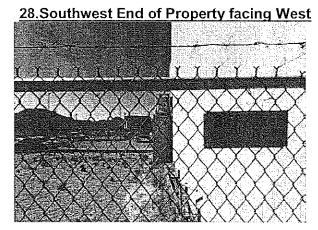
25.Southwest End of Property facing North

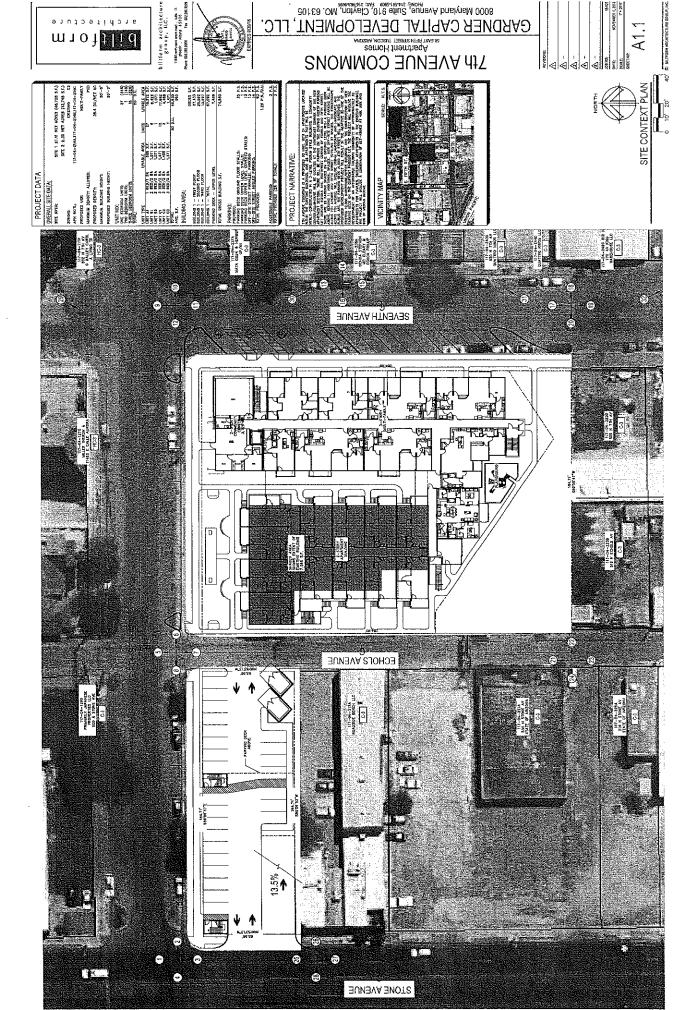


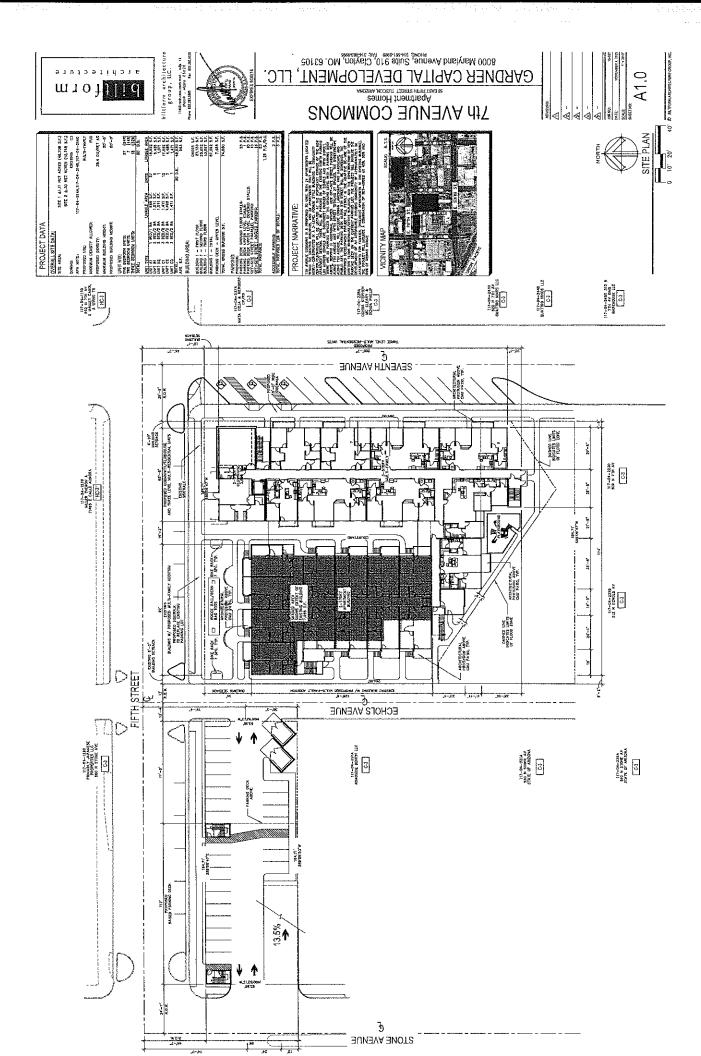


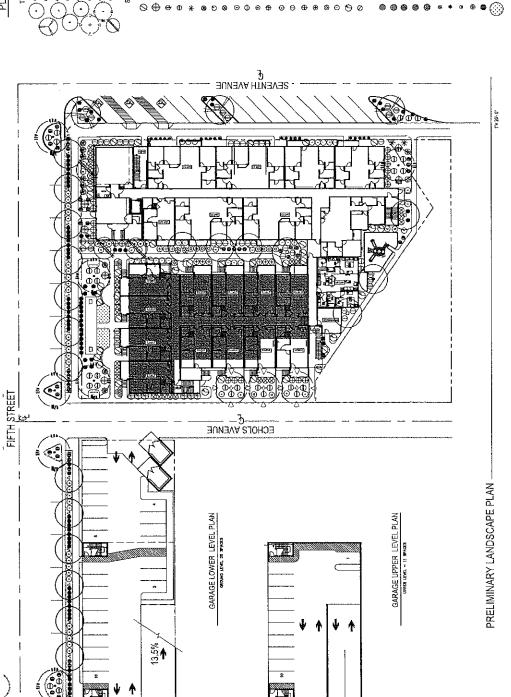
27.Southwest End of Property facing South











PLANT LEGEND

27 Burl 10 Cal. 714 3 W Burl 10 Cal. 714 3 W En 1 10 Cal. 8 H KW Burl 10 Cal. 10 H KW Burl 10 Cal

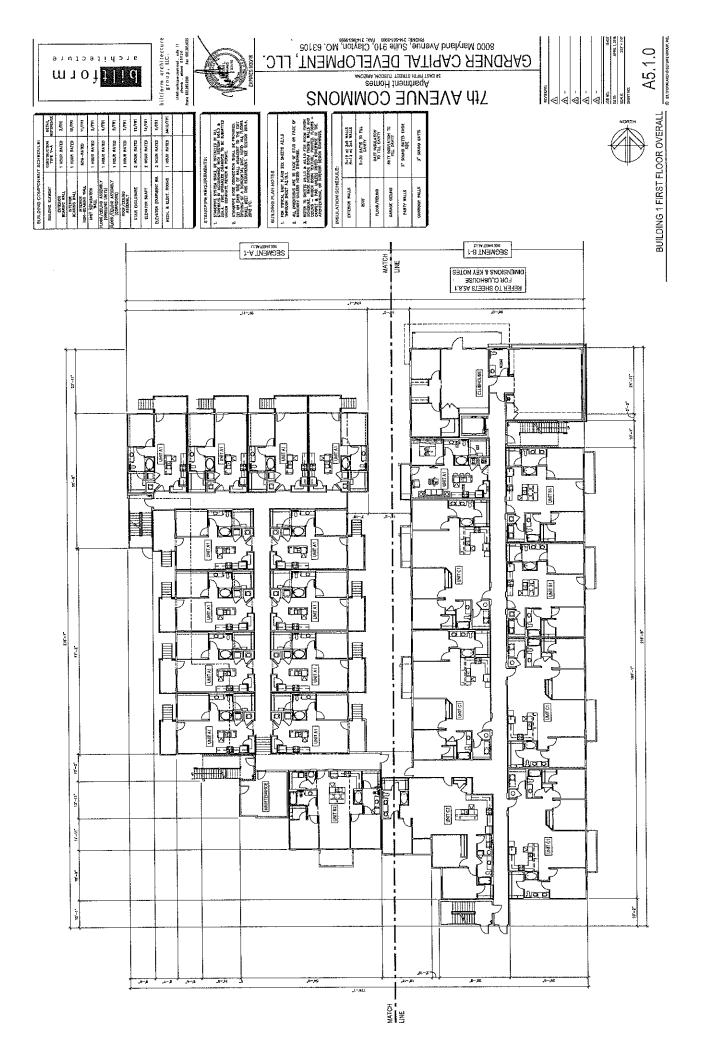
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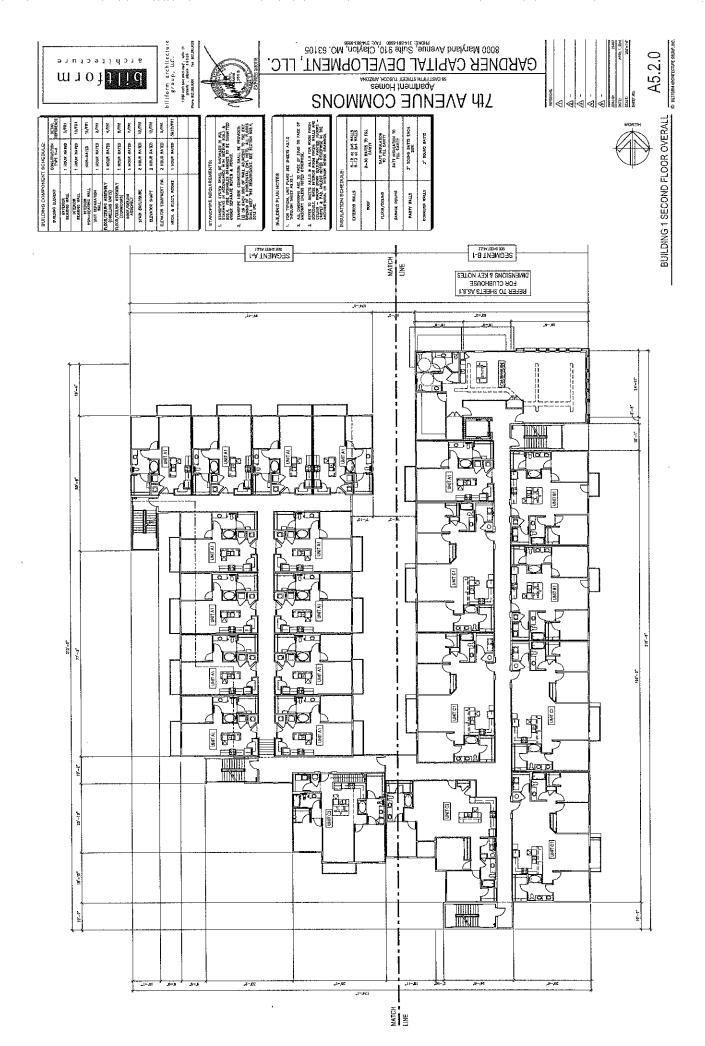
S000 Maryland Avenue, Suite 910, Claylon, Mo. 63105

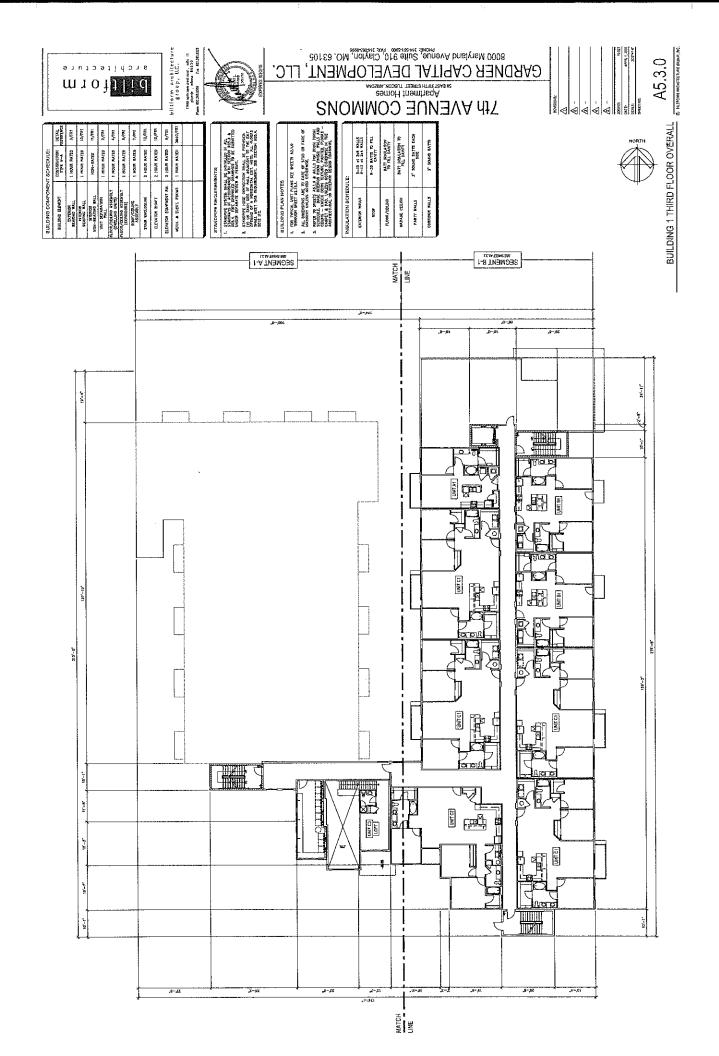
8000 Maryland Avenue, Suite 910, Claylon, Mo. 63105

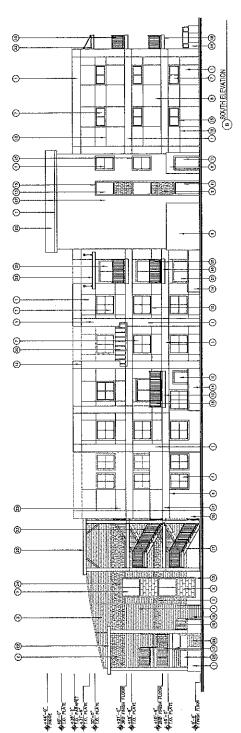
71h AVENUE COMMONS

PRELIMINARY LANDSCAPE PLAN











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TO, PARAPET

10 PART



A5.5.1

BUILDING 1 NORTH/SOUTH ELEVATIONS

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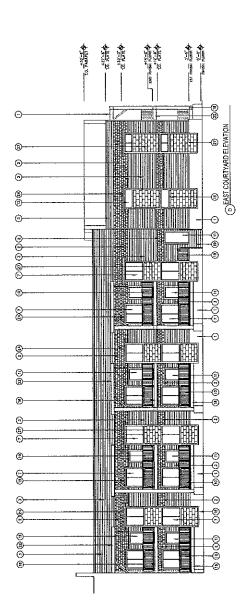
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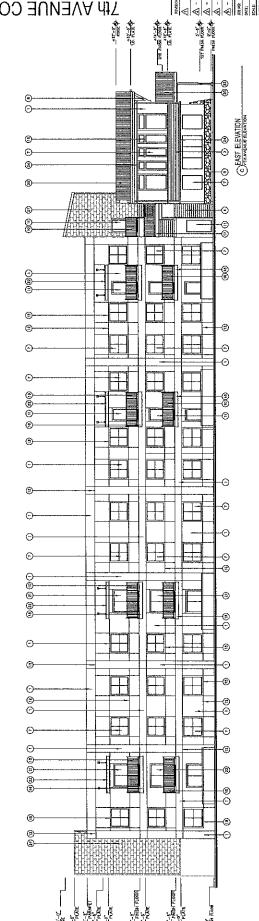
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8000 Maryland Avenue, Suite 910, Claylon, MO. 63105 GARDNER CAPITAL DEVELOPMENT, 7th AVENUE COMMONS

SEAST PREHIST TUBGON, ANEXUM.

Å5.5.2

BUILDING 1 EAST ELEVATIONS

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Old Pulte

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WEST ELEVATION C ECHOLS AVENUE ELEVAT 900909

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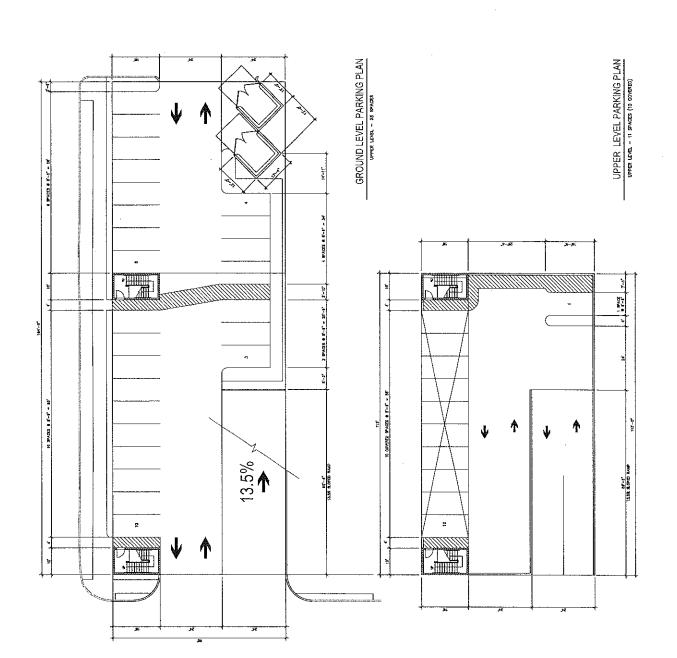
4 210 PHES ACOR

**♦** 27'-0' PANISH CLOSE



A5.5.3

BUILDING 1 - WEST ELEVATIONS







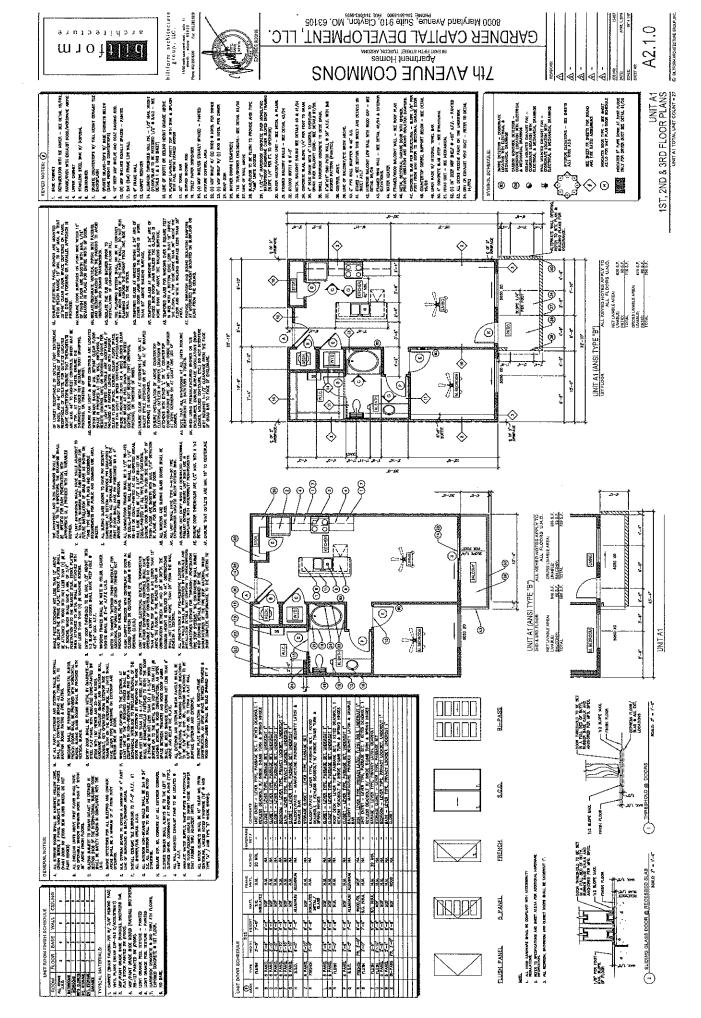
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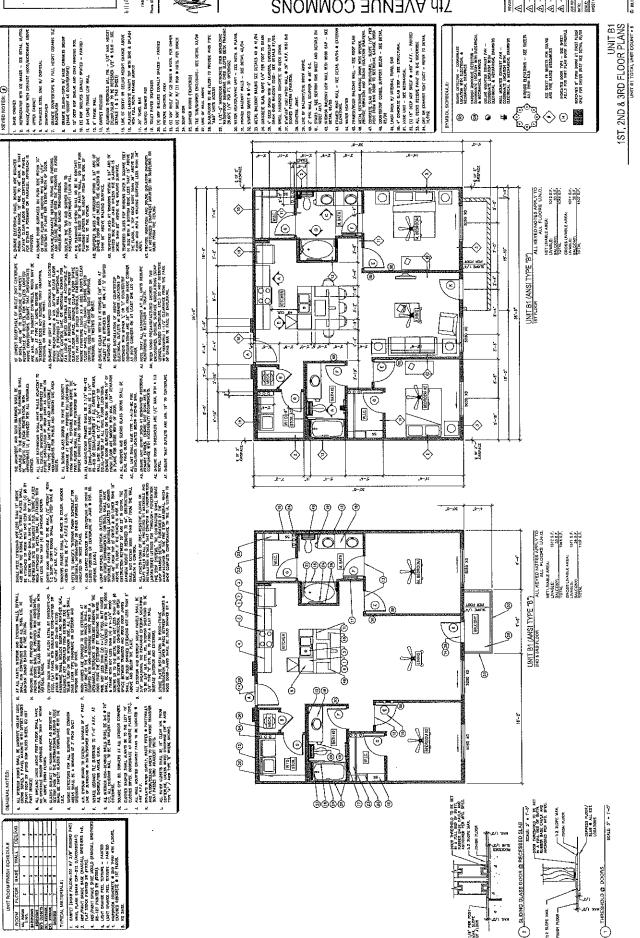
71h AVENUE COMMONS

Stort Peru street Theore, Suite 910, Clayton, Mo. 63105

S000 Maryland Avenue, Suite 910, Clayton, Mo. 63105

S000 Maryland Avenue, Suite 910, Clayton, Mo. 63105





8000 Maryland Avenue, Suite 910, Clayton, Mo. 63105

САВОИЕК САРІТАГ DEVELOPMENT,

7th AVENUE COMMONS
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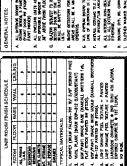
biltform archilectur group, LLC.

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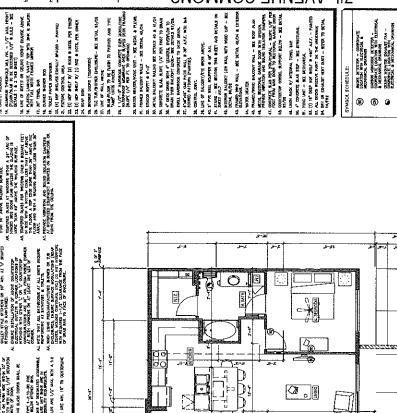
C: BAZZORMANCHITECNINE GROUP, B



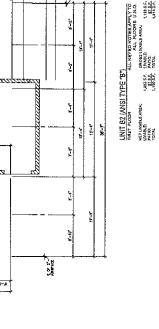
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THRESHOLD & PREMARY ENTRY BOOR

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UNIT B2 FLOOR PLAN

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CARDNER CAPITAL DEVELOPMENT, LLC.

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Page 1745 AVENUE COMMONS

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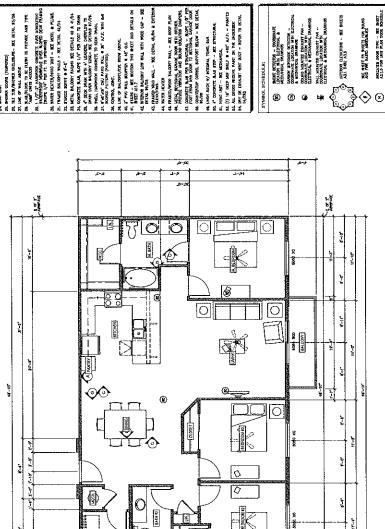
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1514 4 4	P. WED HANDS AND EXPONED TO THE EXTENSION, AT			SHERE PURMING (BUCH AS A BUD) BLOCKS CLEAK		10. (5) MOF SHELYES EQUALITY SPACED - PARTED	
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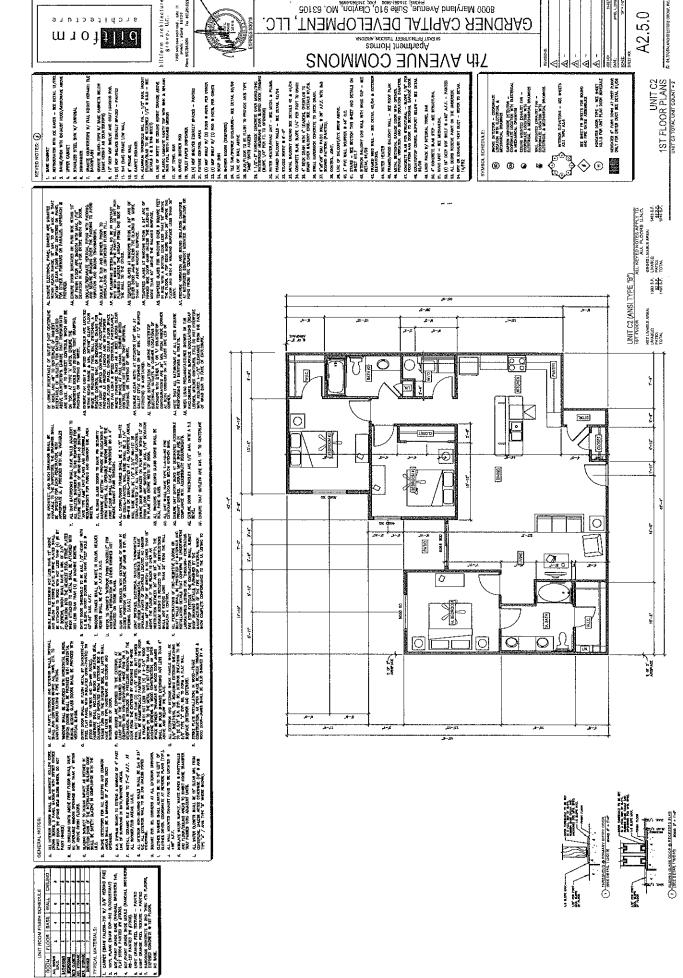
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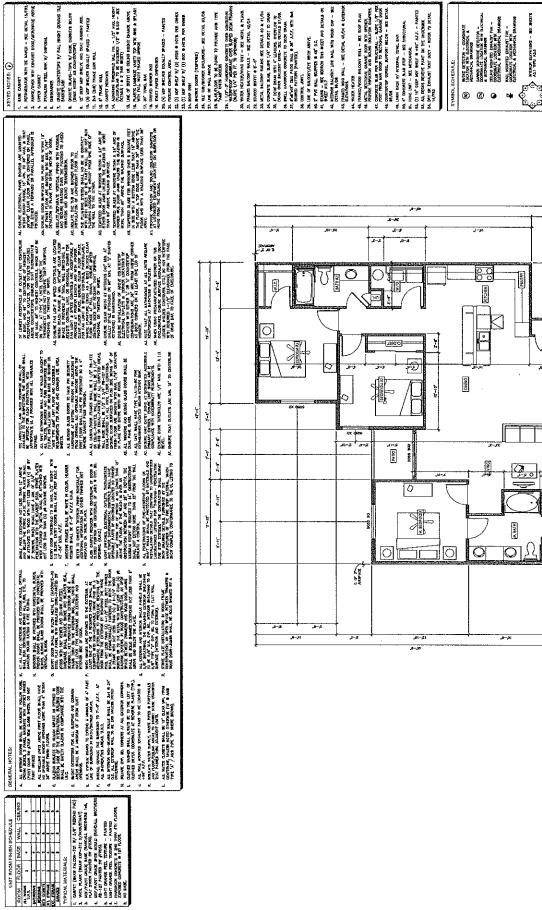
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7th AVENUE COMMONS

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GARDNER CAPITAL DEVELOPMENT,

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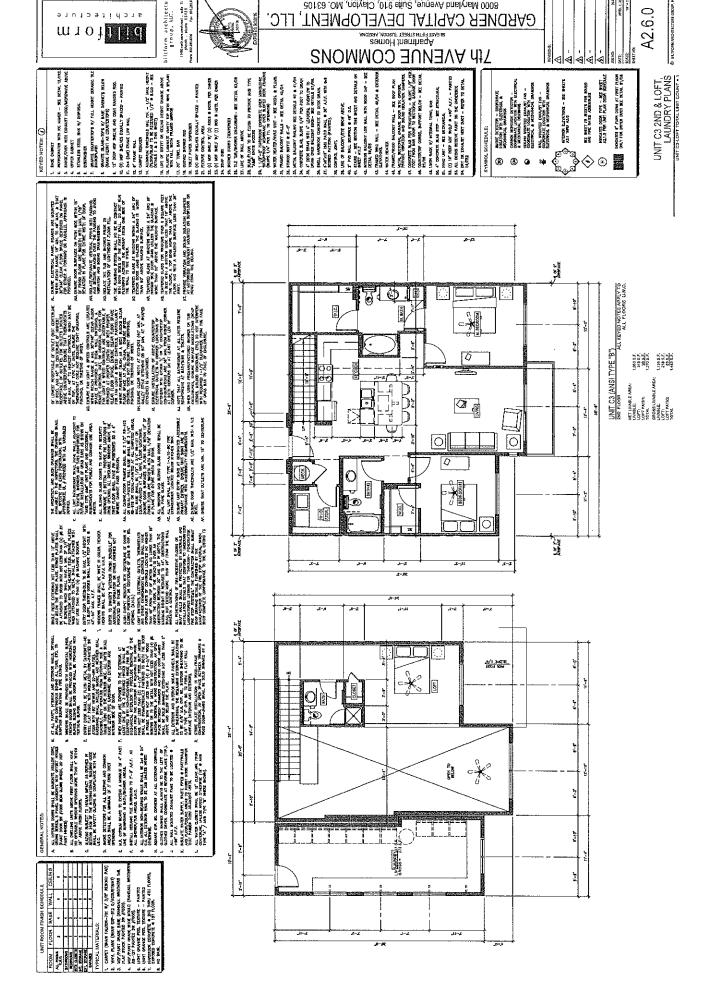
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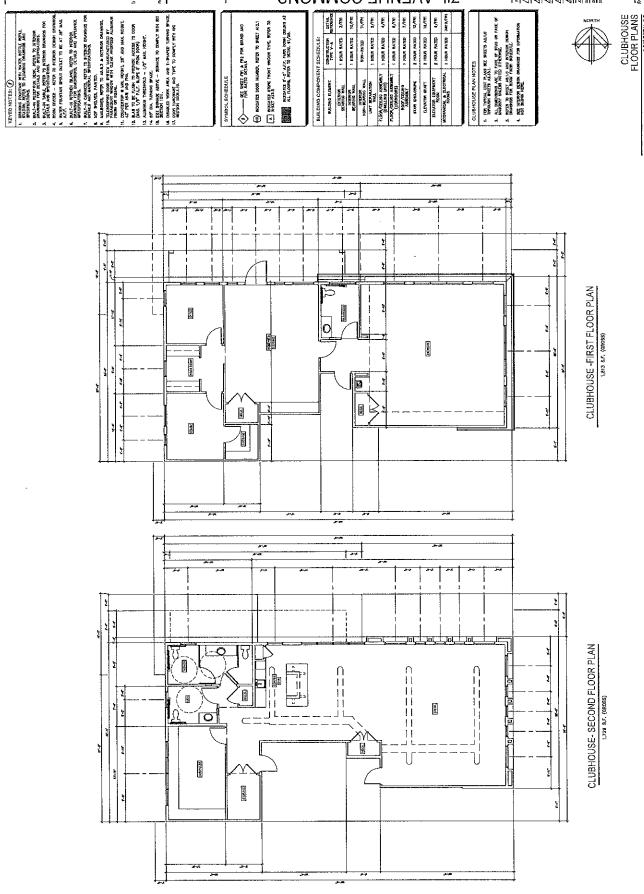
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SLOB.

A2.5.1



8000 Maryland Avenue, Suite 910, Clayton, Mo. 63105



architecture

miotine

biltform architecture group, LC.

7th Avenue Commons
Abarthent Homes
ABERT TRECK, ARECING

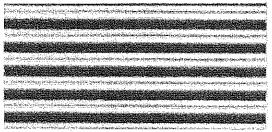
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A2.7.0

GARDNER CAPITAL DEVELOPMENT, LLC. 8000 Maryland Averge, Suite 910, Clayton, Mo. 63105

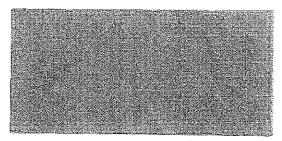
CLUBHOUSE FLOOR PLANS

Stucco Base Dunn Edwards DE6372 "Lace Veil"

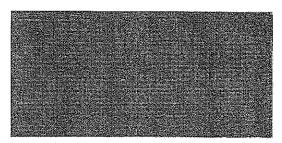


Corrugate Metal Siding and Roof – Zinc Color

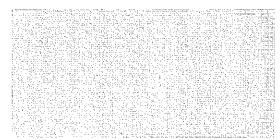
Shake Siding
Dunn Edwards DE6275 "Silver Creek"



Accent Stucco and Fascia Dunn Edwards DE6376 "Looking Glass"



Metalwork
Dunn Edwards
DET440 Russet Leather



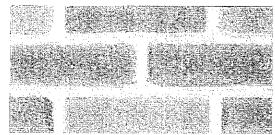
Lap Siding
Dunn Edwards DE6277 "Pebble Walk"



Building Materials and Color Exhibit 7<sup>th</sup> Avenue Commons



Brick Phoenix Thin Brick 450 DATBC "Cimmaron"



Stone Coronado Stone Minnesota Fieldstone "Huron"



Building Materials and Color Exhibit 7<sup>th</sup> Avenue Commons